

AMIGA

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THROUGH TO
THE NEXT
DIMENSION!**

USER

INTERNATIONAL

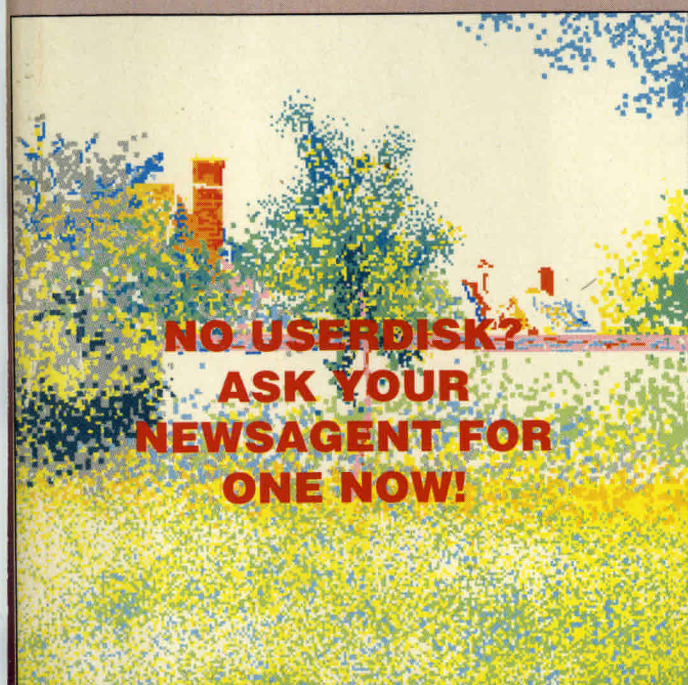
**THE LATEST DEVELOPMENTS
ON THE AMIGA . . .**

ON TEST

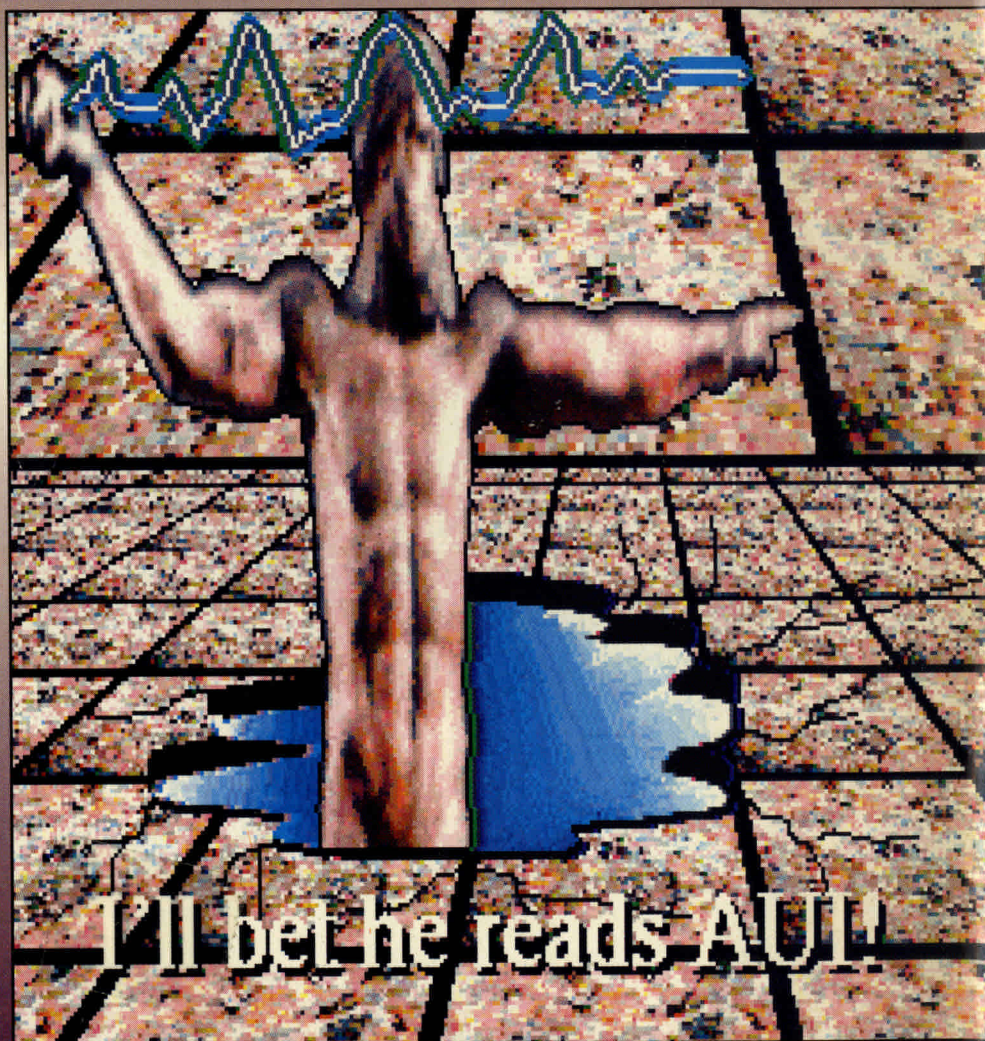
Graphics Workshop . . . Real 3D . . .
The Genitizer . . . SuperBase 4 . . .

PLUS

What you should know about
your dodgy disks . . .
How to turn your 500 into a 2000!

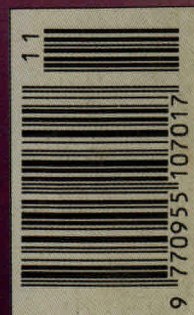


**FULL MEGABYTE
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Amiga Entertainment
What the top games
companies will be
giving you for 1992!

**HOW TO MASTER AMIGA
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SaxonScript

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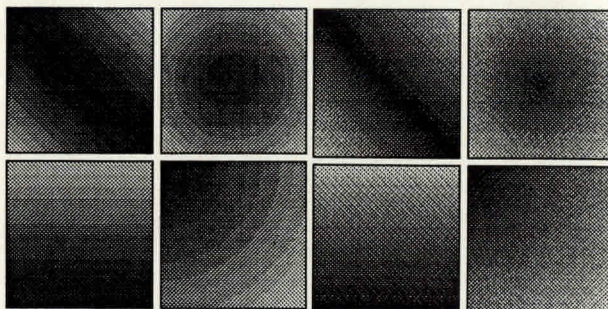
Introducing **SaxonScript Professional**,TM the most powerful and sophisticated *PostScript Interpreter* available on the commercial market. It's like turning your *dot matrix, ink-jet* or *laser printer* into a full fledged *PostScript printer*, with the added flexibility of being able to edit and manipulate individual files! **On printers equipped with resolutions of 300 dpi or more, the output quality of SaxonScript Professional actually exceeds that of 300 dpi Adobe PostScript laser printers!** Halftoned areas in particular, are consistently sharper, more detailed and feature better transitions between various levels of grey than comparable images produced by using *PostScript*.

PostScript Output at 300 dpi



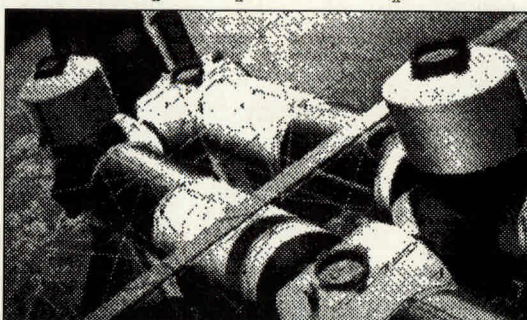
When pixel values cannot be reproduced exactly, **PostScript** renders the affected pixels in the closest darker shade available at the given screen density. *Subtle details are inevitably lost as a result.* *PostScript* halftones also tend to have a grainy appearance because of *PostScript*'s inability to produce irregularly shaped halftone cells.

PostScript's approach to halftoning limits the maximum number of possible greys to a function of both resolution and screen frequency. At lower resolutions, this gives rise to the creation of very visible bands of grey which degrade the overall quality of printed images.



Our unique approach to halftoning does not limit the number of grey levels which can be printed. Consequently, no banding is visible in areas containing colour gradients. This permits smoother transitions and enhances the overall quality of printed images.

SaxonScript Output at 300 dpi



Because *SaxonScript*'s algorithms intelligently switch between *halftoning* and *dithering*, any pixel value can be accurately reproduced. Notice the greater detail found in this image. *SaxonScript*'s images are also sharper and crisper than comparable *PostScript* images because of the program's unique ability to create **irregular halftone cells**.

accurate colour proofs on screen. Using the included **moire testing program**, you can also test screen angles and densities for visible artifacts *before* printing! After verification, *SaxonScript*'s proprietary *compression algorithms* can be used to **compress** your *PostScript* files into a more compact *PostScript* format for faster, i.e., much less expensive output.

***SaxonScript Professional* is available at your nearest dealer for only £99.95 inc. VAT! A free copy of *SaxonScript Professional* is also included with every purchase of *Saxon Publisher V1.2*.**

FONT CONVERSION UTILITIES

SaxonScript Professional supports all *PostScript* downloadable fonts, including **Compugraphic** and **Adobe Type 1** fonts. Custom utilities further allow you to convert *PostScript* fonts in **Amiga Bitmap**, **Saxon Publisher** or **Adobe Type 1** formats for use in a variety of different applications!

IMAGE CONVERSION UTILITIES

Convert your *PostScript* files into **IFF**, **EPS**, or **DR2D** formats for manipulation in various *paint programs* and *desktop publishers*! Or attach **IFF** headers to your **EPS** files, effectively allowing you to *view EPS files on screen*!

PRINTING UTILITIES

Preview *linotronic* files for potentially costly errors *before* sending your output to a service bureau. Print *PostScript* *directly* to the screen display to obtain

FEATURES

- True virtual memory for compatibility with low memory Amigas, or under conditions of heavy multitasking.
- A powerful **PostScript Interpreter** featuring the implementation of all of the standard *PostScript* operators.
- Support for all Preferences printers.
- A standard set of fonts, matching those most commonly found in *PostScript* printers: **Avant Garde**, **Bookman**, **Century Schoolbook**, **Courier**, **Helvetica**, **Palatino**, **Times**, **Zapf Chancery** and **Zapf Dingbats**.
- Support for all *Postscript* downloadable fonts including **Compugraphic**, **Adobe Type 1** and **Adobe Type 3** fonts obtained from any number of different sources. Any *PostScript* font on an Amiga disk can be manipulated within **SaxonScript Professional**.
- Conversion of *PostScript* fonts into **Saxon Publisher**, **Amiga Bitmap**, or **Adobe Type 1** formats.
- A full colour **PostScript** screen preview which is 100% accurate to the limitations of the screen display.
- The ability to convert *PostScript* files into a **compressed PostScript** format for faster output at service bureaus.
- The ability to test screen angles and densities for **moire patterns** before printing.
- The ability to integrate individual separations into a single full-colour document for **accurate colour proofs** on colour printers.
- The conversion of *PostScript* files into **IFF**, **EPS**, **EPSF**, or **DR2D** formats for editing and manipulations in various applications.
- Automatic sensing of **68881**, or **68882**.
- Implementation of all standard *PostScript* operators.
- An open architecture to allow customisation by PD programmers.
- Delayed printing and print to disk options.

MIN REQ: 1 meg, 2 drives.

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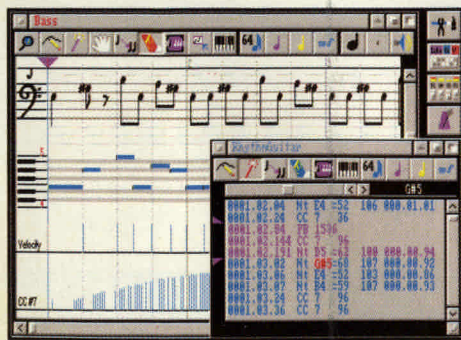
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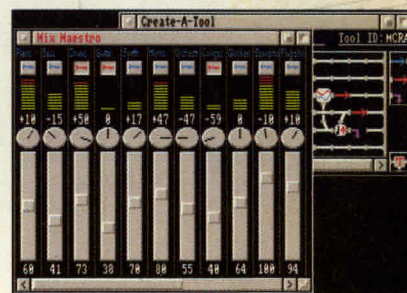
transposed score and individual parts, with lyrics, chord symbols, measure numbers, labeled sections, page numbers, author, title and a wide selection of automatic transpositions.

ARRANGING: BARS&PIPES PROFESSIONAL's Graphical Song Construction window enables you to see an overview of your composition, label it and reorganize it. And with its Graphical Tempo Mapping window, you can easily add realistic tempo change curves.

MIXING: BARS&PIPES PROFESSIONAL's automated mixing feature, MixMaestro, includes real-time control of volume, panning and other MIDI controllers. As your music plays, you can move the various sliders and knobs to adjust the balance of your arrangement, then save your mix to disk. MixMaestro automatically sends control change data to your tracks.

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AMIGA

USER INTERNATIONAL

NOVEMBER 1991 VOL 5 NO. 11



Amiga Art - Page 32



Battlechess - Page 74



Graphics Workshop - page 94



Real 3D - Page 109

CONSTANT FACTORS

- 5** The Amiga Dimension: Antony Jacobson looks at Amiga developments from Hastings 1985 to Denver 1991.
- 125** Amiga Answers: Andy Eskelson battles through this month's wave of technical queries.
- 33** Newsfile: Keyboard overlays, a sixpack of CD drives, Sybil who'll do everything and an accelerating techno world. It's all in the Newsfile.
- 128** Amiga Letters: If you have a point then Bud Vennos offers you the chance to Write To Reply.
- 48** The Update Column: Mike Nelson is back again with more improving ideas, programs and hardware new and not so new.
- 130** The Fat Lady Sings. Read the secrets of the developers of Amiga hardware and software and faint! The Fat Lady reveals all.

USERDISK

- 10** Hyperdisk: A new-look Hyperdisk with an intriguing and novel interface and some exciting material including the top communications program.
- Lots for you to use and to learn from. No ordinary magazine could give you a disk like this! Only will **AUI**!

SURVEY

- 119** Reader's Survey: If we know what you want, we can't give it to you. Fill this in now and tell us!
- You can win a great prize simply by letting us know all your intimate desires.



TEST DRIVE

- 40** Genitiizer: John Kennedy examines this low-cost graphics tablet from Datel.
- 99** CDTV - The Magic Black Box: Janet Bickerstaff takes a look at the latest disks for Commodore's Baby.
- 46** Superbase Professional 4: high cost, but is it worth it? Pat Kelly tests this professional version of Precision's superior database.
- 109** Real 3D: One of the easiest ray-tracing programs to use, but what does John Kennedy think the reality is?
- 94** Graphiucs Workshop: Peter Lee reviews this excellent graphics tool which matches up to Deluxe Paint, and brings extra facilities for the Amiga.
- 132** Agenda To the Amiga: Gwynne Harper takes a look at this handy device that can add mobility to your Amiga information process.

FIELD REPORTS

- 15** Made int USA: Mike Nelson reports on the people, and the companies behind the biggest developments on the Amiga, stateside. He begins with some inside information on a hot hardware manufactures, GVP.
- 19** Hitting Toasterville: The Video Toaster has created quite a stir in the USA. Mike Nelson flies into Kansas to probe the company responsible and finds out who these crazy and rich people from Newtek really are!

MENTOR

- 32** Computer Art: Graham Baldock shows what can be achieved with an Amiga, a simple paint package, a little instuction and a tube-full of talent.
- 122** Understanding the Amiga - Workbench Part 5: John Kennedy continues his from the ground up tutorial of the Amiga's WIMP system.

SPECIAL OFFERS

- 83** Subscribe to **AUI** and recieve a free boxed ster of 10 pre-formatted 33.5in disks, each with its own Amiga Usser International designer label.
- Get your monthly **AUI** fix through your hungry letterbox. Wake up with **AUI**!

USER PORT

- 21** DPAINT PART IV: Peter Lee goes in depth to show off some of the fancy effects which can be obtained with this splendid updated package.
- 37** DIY 2000: Ever wanted to plug A2000 cards into your A500? Gary Fenton shows you how.
- 116** COMMS: John Kennedy helps you to get started in the serious, but fascinating, business of computer communications. Tune in, turn up, log on!
- 124** P.D.: The latest Fred Fish disks are once again melted by Norman Stone.
- 128** Programming Part 1 – The Secret of the Black Box: John Kennedy starts this guide into the secretive world of computer programming.
- 134** QUAD: Reggy Staire is back with more not so very legal tricks and tips.
- 136** *AUI* Spell Part X: Paul Overaa finishes of this project with an overview of what has been achieved and leaves you with some interesting new instructions.

HARD COPY

- 115** Mastering Amiga C: Mike Nelson reviews Paul Overaa's new book which shows you what's required in Mastering Amiga C.
- 144** Computer Ethics. Martin Witton asks 'when is computer crime not a crime' and should we have a 'good conscience' program for the Amiga.

COMPETITIONS

- 24** Picture This! Competition: The astonishing results. See what the Amiga *AUI* latest can do to win the Canon Ion Camera.
- 24** WIN!: Upgrade your Deluxe Paint to version IV in this open to all graphic competition.
- 130** The results of the fantastic Fat Lady Sings Pat Kelly Compo is unbelievable.

ENTERTAINMENT



- | | | | |
|-----------|---|-----------|--|
| 67 | Top 10 Games Charts | 74 | Battlechess II – Electronic Arts |
| 67 | Recommended Games | 78 | Beast Buster – Activation |
| 69 | Not the Biggest Game in Town: The first part of a report that lets you in on the secrets of what the games houses are planning to send your way in the coming months | 87 | Adventure Now! with Andy Moss |
| | | 88 | Search For The King – Accolade |
| | | 89 | Bill and Ted's Excellent Adventure – Accolade |

AMIGA DIMENSION

Dear *AUI* Reader,

In this *AUI*, we report on awards made at the military-sounding DEVCON, the Amiga Developers' Conference in Denver, U.S.A. and the European Developers' Conference in Milan, Italy.

AUI had a representative at the Denver meeting and, perhaps even more importantly, at the very first European conference in Hastings, U.K. in 1985. It was the exciting prospects emerging from that conference which led us to start Commodore Business and Amiga User, the first European Amiga magazine.

As most other people, Commodore never then imagined that the Amiga would make its biggest impact in the U.K. is as a home/entertainment computer. The plans revealed at the Hastings conference were almost exclusively business-based.

There is an oddity about Developers' Conferences. Those who attend are required to sign non-disclosure agreements. This means that they are forbidden to let anyone to know what ideas, plans, problems are discussed there; certainly a restriction for a journalist... This prohibition is not to stop CBM's competitors from finding out what is coming; many of the developers also create for other computers too. The restriction seems mainly designed to protect the established and presently sold products from being disregarded while people wait for the more exciting next generation. For instance, CBM now wisely are selling only 1 Meg 500s but if that had been announced well in advance, sales of 512K 500s still in stock would certainly have suffered.

DEVCONs are also workshops where ideas are argued that may never see the light of commercial day, so CBM, and the developers too, may not want to arouse false hopes.

Nevertheless, within a short time the "secrets" are generally leaked, and few disasters seem to occur. For what both Commodore and the developers must realise is that the Amiga and its associated products have to go on evolving and growing to survive. 256K must turn into 1 Meg, 8 bit colour to glow as 24 bit, the 68000 to leap up to 68040 which will become the... ah, sorry, you can't be told that just yet. However, if you want my own unsubstantiated predictions, we are going to see some far-reaching developments in the Amiga both in the near future and in the years up to its first decade in 1995, and they will show a marked lessening of emphasis on games, even the U.K.. Integral hard drives? 020s as standard? Workbench 4.0? Well, as our Newsfile writers are fond of saying, for coming developments, watch this space

Yours sincerely,

**Antony Jacobson,
Managing Editor**

USED FOR THIS MONTH'S *AUI*

Arnor's Protext 5.0, ASDG's Art Department Professional and Cygnus Ed, Canon's RC-260 Still Video Camera, CCS's Dos-2-Dos, Checkmate's 1500, Electronic Art's Deluxe Paint III and IV, GVP's Series II FaaastROM Hard Disk Controller Card fitted with 8Mb SIMM expansion memory and a 105Mb Quantum 11ms Hard Drive, HAM-E, Hisoft's Devpac, Innovatronics CanDo, Microsystem's Scribble!, Newtek's DigiView Gold 4.0, Supra's 500XP Hard Disk Drive Controller Card, Nordic's Power Cartridge, Oxxi's SpectraColor, Precision's Superbase Professional 4, Real 3D, Nik William's PictureWare.

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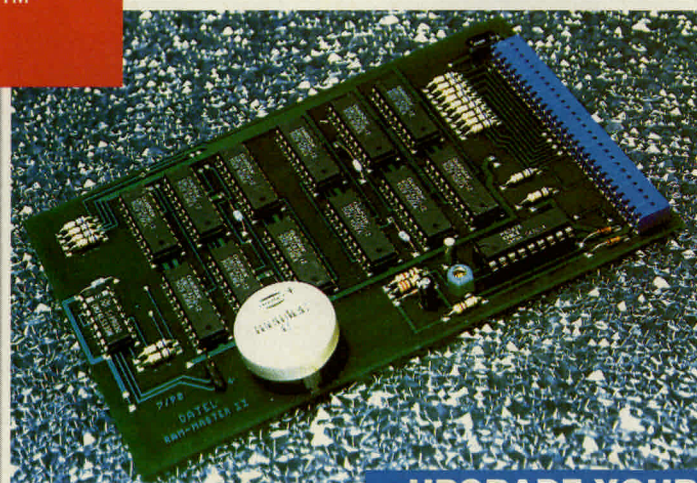


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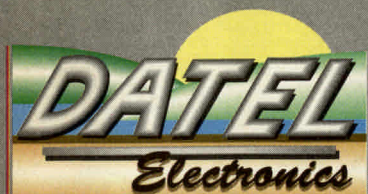
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With Sound Tracker you can find the complete music in programs, demos, etc. and save them to disk. Saves in format suitable for most track player programs. Works with loads of programs!!

● AUTOFIRE MANAGER

From the Action Replay II preference screen you can now set up autofire from 0 to 100%. Just imagine continuous fire power? Joystick 1 and 2 are set separately for that extra advantage!

● DISKCODER

With the new "Diskcoder" option you can now 'tag' your disks with a unique code that will prevent the disk from being loaded by anyone else. 'Tagged' disks will only reload when you enter the code. Very useful for security.

● PREFERENCES

Action Replay II now has screen colour preferences with menu setup. Customise your screens to suit your taste. Very simple to use.

● DISK MONITOR

Invaluable disk monitor - displays disk information in easy to understand format. Full modify/save options.

● DOS COMMANDS

Now you have a selection of DOS commands available at all times - DIR, FORMAT, COPY, DEVICE, etc.

● DISK COPY

Disk Copy at the press of a button - faster than Dos Copy. No need to load Workbench - available at all times.

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- Show memory as HEX, ASCII, Assembler, Decimal
- Copper Assemble/Disassemble - now with suffix names

REMEMBER AT ALL TIMES YOU ARE INTERROGATING THE PROGRAM IN IT'S "FROZEN" STATE

WITH ALL MEMORY AND REGISTERS INTACT -

INVALUABLE FOR THE DE-BUGGER OR JUST THE INQUISITIVE!

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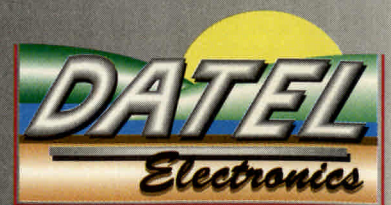
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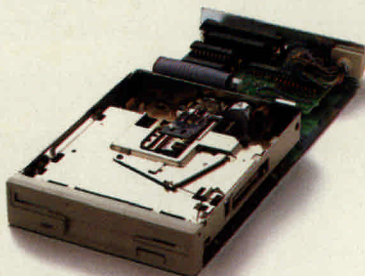
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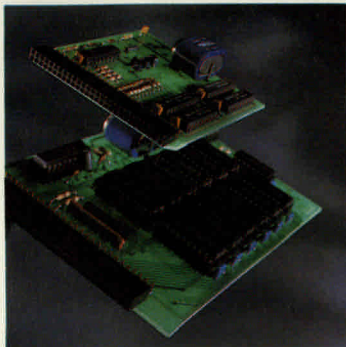


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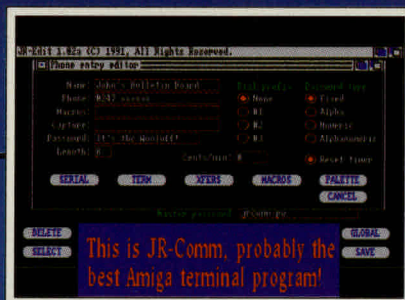
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AUI USERDISK

JR-Comm

Probably the best Amiga comms package ever is on the disk in archived format. Follow the simple instructions to get yourself on-line in minutes!

AUI USERDISK No. 6



Cando

This month's Hyperdisk was created using the amazing Cando. Find out for yourself what Cando is and what it does with this interactive hyperdemo.

AUI USERDISK No. 6



Movelt!

A simple but addictive game from Think! Ltd. Swap the pieces of the ray traced image around to complete the puzzle. The 20th century jigsaw.

AUI USERDISK No. 6



Programming

There are two icons in the programming drawer - one contains the source code, and the other is a runnable demo of the star field code in operation which you can see by double clicking on the Demo icon. The source code will be displayed using the 'More' text reader when you double click on the 'starfield.include' icon. Press space to look through the code, and q to quit. The source is in standard ASCII format, so you will be able to load it directly into your favourite assembler with no problems. Remember that source is designed to be combined with other codes, such as that on last month's Userdisk.

Utilities

The utility program IffConverter will take standard IFF pictures such as those produced by Deluxe Paint, and save them as raw bitmaps. These bitmaps can be used by machine code programmers by including them into the source files. IffConverter can also load IFF sound samples, and save them in binary form too. Using the program is easy, as all the functions are available from pull down menus. If you are copying the program to another disk, remember that it needs the IFF.LIBRARY, which is contained in the LIBS drawer on the disk.

Welcome to the November
AMIGA USER INTERNATIONAL
HYPERDISK

Please click with the
left mouse button to
continue...

Interact with your magazine's
exciting world of Hypermedia
here, with over a megabyte of
information, sounds and graphics
squeezed onto one auto-bootable
disk. To use, simply switch on
your Amiga and insert the
Hyperdisk. Have fun!

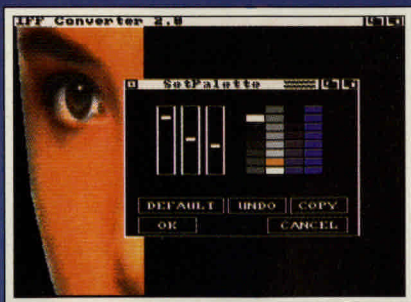
Anti-A

Banish those jaggies! A useable demo of Anti-A from Zen is on the disk to enable you to create your own extra-smooth colour fonts.

AUI USERDISK No. 6

Font Anti-A
using Anti-A
ZEN

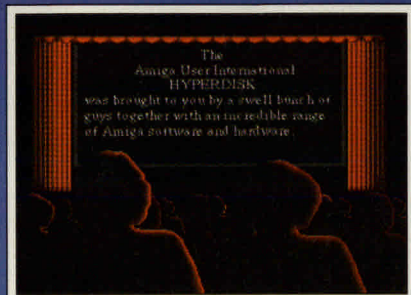
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Utility Programs

Not one, not two but three amazing Amiga programs! Convert IFF graphics and sounds to raw format, add whizz lines to your windows and paint your workbench rainbow colours.

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All About

Everything you never wanted to know about who and what made the amazing multimedia experience possible. Modesty rules, ok?

AUI USERDISK No. 6



Programming

Watch and learn as AUI's programming genius adds a moving Star Field to your growing collection of Demo routines.

AUI USERDISK No. 6

How to copy your Hyperdisk

In case of accident/alien invasion/ World War 3 etc, it is important that you make a back-up of your Hyperdisk as soon as possible, if not before.

- * Boot from your normal Workbench disk
- * Insert the Hyperdisk, and click once on it
- * From the pull-down menu at the top of the screen, select DUPLICATE
- * Follow the on-screen instructions, inserting a blank floppy when asked for the DESTINATION disk.
- * When the disk activity has finished, you must rename the copy. highlight the copy's icon, and select RENAME from the pull-down menu.

* Make sure the new disk is called HYPER and not COPY OF HYPER. Place the original in a safe place.

Note for overseas readers

Although the Hyperdisk was developed on a Pal Amiga, nearly everything should work on an NTSC system, with the exception of the Movelt! demo which places several requesters too far down the screen to be selected. In an attempt to get around this problem, you may want to copy the demo to your own workbench disk and alter the 'hot spot' on the pointer to be at the extreme bottom left.

Faulty Disk?

In the event that your Userdisk fails to load, please return it to the address below for a free of charge replacement, and allow 28 days for delivery:

AUI FAULTY DISK RETURNS, TIB PLC., 36-50 Adelaide Street, Bradford, BD5 0EA.

Please include your name and address in BLOCK capitals.

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This 'Green with Envy' draw can be entered by simply returning your used Userdisks, once you have finished with them, to TIB PLC. They will supply AUI with names and addresses of readers who return their disks. Each month the draw is made for the FREE subscription offer. If you already have a subscription you can extend it further or supply it as a present to a colleague.

In September of each year the major draw will be made at our London offices and a lucky 'green' reader will win the fabulous holiday for two in Hong Kong with hotel, flights and spending money! You are allowed as many individual entries as you wish! For each disk you return a separate entry into the draw is made. Of course disks must be of an acceptable standard - as if they are not they'll be rejected and you'll lose out on your entry as well as your disk. Returned disks will be recycled so helping to save material and protect the environment.

Send your used disks to:
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BD5 0EA.

AUI USERDISK No. 6

JR-Comm

Before you can use JR-Comm, you will need to un-archive it onto a separate disk. Full instructions will appear when you click on the JR-Comm icon, although they assume you have already unarchived the file to a blank disk. For that reason the instructions below do not assume you have done any unarchiving. Please read them - and the instructions on the disk - through carefully before starting.

1. Boot from your standard Workbench disk.
2. Make a copy of the Workbench disk. This disk will contain the comms program and associated files when we have finished.
 - 2.1 Highlight the Workbench disk icon
 - 2.2 Select DUPLICATE from the pull-down menu.
 - 2.3 Follow on-screen instructions.
3. Rename the disk to be called JRCOMM.
 - 3.1 Highlight the copied Workbench disk icon.
 - 3.2 Select RENAME from the pull-down menu.
 - 3.3 Change the name to be JRCOMM and press return.
4. Now replace your Workbench disk in the drive and open a SHELL.
 - 4.1 Open the disk icon by double-clicking.
 - 4.2 Double-click on the SHELL ICON.
- 5 Un-archive the JR-Comm files to the ram drive.
 - 5.1 Type COPY HYPER:C/LHARD RAM:
 - 5.2 Place the Hyperdisk in drive.
 - 5.3 Type RAM:C/LHARC X DF0:JRCOMM.LZH RAM:
 - 5.4 Wait until the disk activity ceases.
- 6 Copy the JR-Comm files to the JRCOMM disk.
 - 6.1 Type ASSIGN C: JRCOMM:C and swap disks when asked.
 - 6.2 Put the Hyperdisk in the drive.
 - 6.3 Type EXECUTIVE RAM:WBSTRIP JRCOMM:
 - 6.4 Wait.
7. Tidy up
 - 7.1 The documentation files are still in the ram disk, so you may wish to copy them to another disk before resetting your Amiga. Alternatively, unarchiving the file again, but this time to a blank floppy instead of ram.
 - 7.2 To use JRCOMM, reset your Amiga with the JRCOMM disk in the drive. Double click on the disk icon when it appears, and on the JR-Comm icon.

8 That's it!

8.1 Pat yourself on the back and have a cup of tea.

Interact with your magazine! The exciting world of Hypermedia is here, with over a megabyte of information, sounds and graphics squeezed onto one auto-booting disk. To use, simply switch on your Amiga and insert the Hyperdisk. Have fun!



MoveIT

Loading MoveIT! is easy. Boot from the Hyperdisk in the usual way, and use the menu to get to the MoveIT! screens. You will find a button marked 'Load MoveIT!' so click on it. Unless your Amiga is lacking in memory (1Mb is fine), MoveIT! will load and run.

If it doesn't run, click on one of the QUIT buttons to leave the CanDo application, and return you to the normal (although strangely coloured) Workbench. You will need to double-click on the disk icon, then open the MoveIT! drawer and click on the MoveIT! icon.

Once MoveIT! is working, everything is quite simple. Click on the disk icon to 'load' the example picture. In this version of MoveIT! the picture is an integral part of the program. Commercial versions allow many different pictures to be loaded from disk, hence the icon. Next select the difficulty level by choosing a grid size. Once the picture is jumbled, the fun begins. Try to re-assemble everything as quickly as possible!

Anti-A

Anti-A is on the disk in a ready-to-use click-and-play format. The only problem is, you'll need to give it some fonts to play with in order to achieve anything!

Anti-A creates smooth text by processing existing fonts. In order to obtain the extra information needed to produce new shapes, Anti-A shrinks a larger font. In other words, to get a 24 point font you'll have to start with a large size. In this demo version, you'll need to supply a font four times larger. (Note for non-DTP fanatics. The 'point size' of a font is simply a measure of how large it is. In printing terminology, a 'point' is 1/72nd of an inch. However, on-screen the term is strictly relative, as the absolute sizes of the font is determined by the size of the television screen. Normal Amiga text is about 8 points large.)

The best way to use Anti-A is directly from the Hyperdisk. Find the Anti-A pages, and select quit. Then open the disk icon, open the Anti-A drawer and double click on the Anti-A icon. (The 'click me' icon is an example picture). You'll get a warning that display works best with the font Courier 13, which wasn't put on the disk for reasons of space (And not laziness? Ed.)

Once Anti-A is running, you should load the font you wish to process from the pull down menu option, FILES. Then choose the re-scaled size - in this case, a quarter - and click on the CONVERT box. You'll be asked for a destination path and whether you want to confirm each save. In a few moments, the new font will have been created and the font directory will be sorted for you (click CONTINUE). To use the new font in Deluxe Paint, click on the ColorFont icon before loading. Then choose a new font in the usual way, and your Anti-Aliased super smooth font will be waiting. These new fonts look best in interlaced mode, and add a very professional touch to any video work. Obtaining suitable fonts isn't difficult as many PD libraries have/hundreds in stock. A DTP package such as PageStream or ProPage will produce fonts which are perfect.





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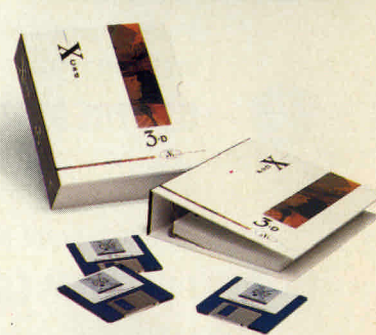
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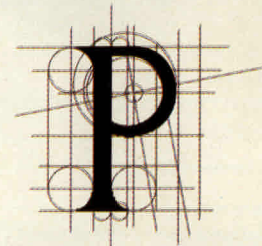
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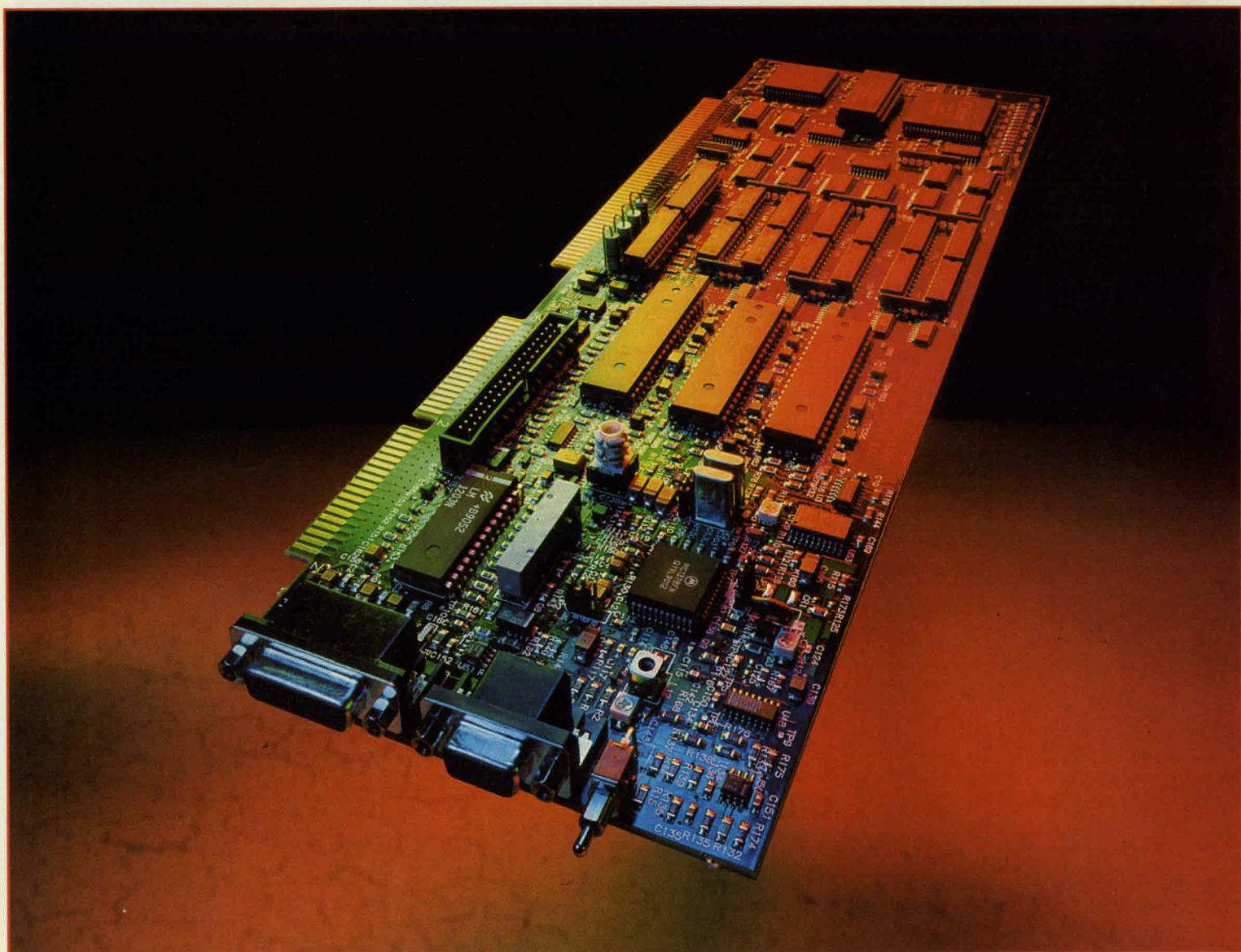


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Great Valley Products . . .
Power from the Metal



FIELD REPORT

MADE IN THE USA

Great Valley Products CONTINUED

The vast majority of Amiga products originate in the United States, though an increasing amount coming from Germany. But, with a few honourable exceptions, still there are precious few British peripherals. This MADE IN THE USA series will take an in-depth view of the main American companies, including Commodore itself to keep updated on the ever changing, fast developing Amiga scene. As we report there is an Amiga developers conference going on in Denver, where exciting new ideas are being discussed. One of the leading companies at this conference is Great Valley Products, one of the outstanding purveyors of hard drives and processor accelerator cards which this month Mike Nelson, our roving reporter, puts under AUI scrutiny, with an exclusive interview.

Great Valley Products, more commonly known as GVP in the trade, have been in existence for only three and a half years, but in this short period have expanded to be one of the principle third party suppliers, specialising solely in the Amiga. GVP are located in Pennsylvania, only a metaphorical stone's throw from the big C itself. This was not intentional, but Gregg Garnick who founded GVP with three partners, reckons their excellent relationship with Commodore is just one component of GVP's remarkable success.

The GVP team is headed by President, Gerard Bucas, whose previous position as Vice President of Technology at Commodore itself makes him highly appropriate to front the company; his experience of the global scene gained during four years at West Chester must be a major factor in GVP's far-reaching success with over 50% of sales being outside the USA.

POWER FOR EXTRA DOLLARS

The philosophy behind GVP's strategy is relatively simple in giving the power Amiga users what they want with no compromise on quality and after-sales service, even if this means the price is higher than some of GVP's competitors. Garnick firmly believes that people will go that extra few dollars, pounds, marks or whatever (GVP sells in 25 countries at

present, but this is increasing almost daily), for the added security of a support team of 8 full time technicians to back up their top quality components. GVP's amazing success supports this view.

The design staff is headed by Jeff Boyer, another ex-Commodore designer with responsibilities including the A3000 and many of CBM's own Amiga peripherals. The now sizeable turnover of GVP, some \$2,000,000 a month, allows extensive work to continue in developing new products – always a costly business, but one in which GVP seems to delight.

The final member of the team is David Ziembicki who has the title of VP, Operations. He is responsible for the manufacturing process once the designers are satisfied with the new product. Although GVP do not actually manufacture the boards on their premises, they do have complete control over the components used, insuring the quality is always up to the high standard the Amiga community has come to expect.

SQUILLIONS OF COLOURS

So what's new from the Valley People? Everyone over the Atlantic is going

graphics crazy, with trendy 24-bit cards offering millions upon squillions of colours, and GVP are no exception. The Impact Vision 24 represents a departure from the world of hard drives and accelerators, but as the pictures show, it's a job GVP have done extremely well. 24-bit graphics representing 16 million colours on screen at a resolution of 768 x 625 pixels is the requirement for video work, and seeing as the Toaster is not available for PAL, it is rather refreshing to see that someone out there is thinking about the Europeans and rest of the world, such as Australia.

The IV-24 also has a framegrabber so you can digitise your Granny in all these colours, and you won't even have to update her as the hardware only takes $\frac{1}{30}$ th of a second to accomplish this. Saving to disk in the standard IFF24 format means you can subsequently unleash the power of ADPro on Gran's image, if you like. It doesn't do digital effects like the Toaster, but it does have a genlock and a really ace feature called picture in picture. Just imagine a standard Intuition window containing a perfect moving image of gran while you do your thing with the

Above and right:
24-bit graphics...
the amazing
results of GVP's
IV 24-board a
departure from
the world of
hard drives and
accelerators.



rest of the Amiga.

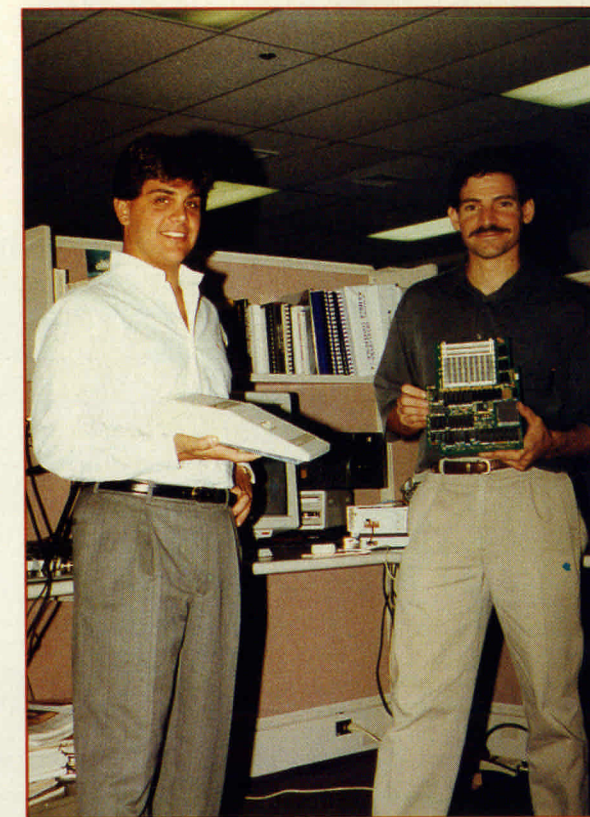
Digitising and displaying 24-bit images is one thing, but it's no good if the software ends there. GVP are bundling IV-24 versions of Macro-Paint, Caligari, and Scala in their presentation package so almost every need is catered for. Suddenly, the \$2199 price tag looks like excellent value for money. Where's my cheque book?

THREE TIMES 3000

GVP aren't forgetting their roots with all this graphics business and, as expected, will ship a 68040 board within a couple of months. The board is up and working (I've seen it!) and its benchmarks are a healthy threefold improvement over an A3000 (25 MHz 68030). Although no price has yet been decided, I would doubt that you'll get a stack of change from \$2000. Now, where's that cheque book again?

Not content with diversifying into graphics, GVP is also moving into noise with their Digital Sound Studio. Priced at \$149 this has to be the cheapest thing they've ever made, and Gregg Garnick promised *AUI* one for review very soon, saying this complete sampling and editing package is state of the art in 8-bit technology. He would say that though, wouldn't he?

The Combo boards reviewed in the October Issue of *AUI* are proving to be extremely popular, and GVP is willing to upgrade users to the '040 version for a

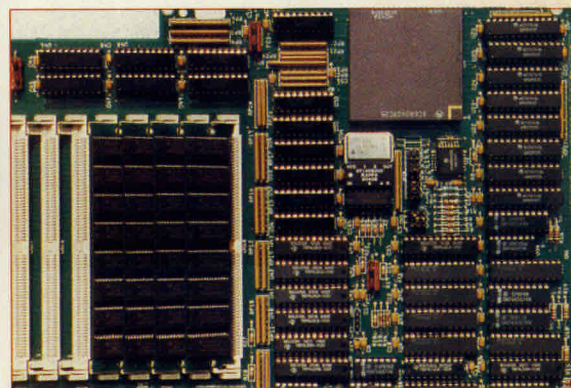


suitable fee, of course. They have also set up a new dealer licence with the Silica Shop people in an attempt to stem the "grey" imports seen previously. Garnick says "We're real excited about this new deal and SDL will honour guarantees on

Above: Gregg Garnick and Jeff Boyer, top GVP executives. Garnick, left, clutches the GVP Hard Disk and Boyer proudly presents the 68040.

any GVP hardware regardless of the origin". Great news, especially if the prices are kept more in line with the USA (the 33 MHz '030 sells for about \$1500).

What about the future? The products outlined are close to shipping and are well beyond the development stage, leaving a lot of technical people spare. They aren't sitting and playing Starglider and although no specific details are available, GVP are looking at still further exploring the graphics potential of this remarkable machine. "Only the Amiga makes it possible", so stay tuned for some interesting developments that are coming from Pennsylvania, from both GVP and the big C itself - with whom we have an exclusive interview with next month's *AUI*.



GVP's Itsey-Vitsey Miracle - the Impact Vision 24-68040. \$2,199 but value for money.



GVP's full product range, pulling in a cool \$2,000,000 a month.

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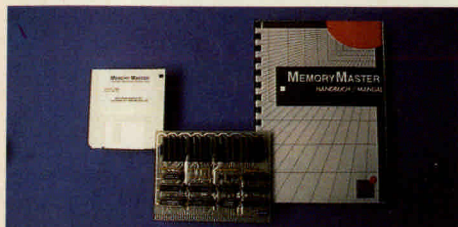
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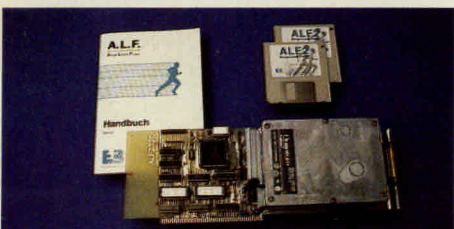
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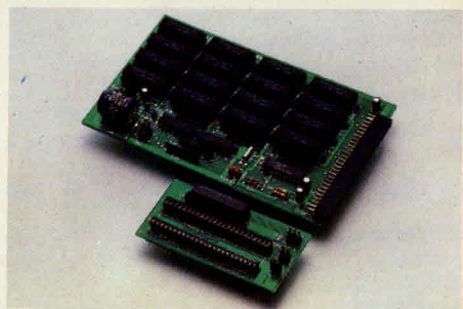


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MADE IN
THE USA

Hitting Toasterville

Mike Nelson gets out into Midwest to call on the company that is helping to make the Amiga great but now seems to want it to disappear.

NewTek is a name familiar to almost everyone in the Amiga civilised world (plus a great many PC and Mac bashers who are rapidly wishing they were Amiga Users), and as such have become one of the most important companies in the field. Why is this? NewTek have been around since the very earliest days of the A1000, and were probably partly responsible for the amazing initial success of the Amiga with those incredible Digiview pictures. NewTek built on these foundations over the next few years, updating DigiView to its current "Gold" version and also developing the HAM paint package called DigiPaint. All of these enterprises now pale almost into oblivion when compared with the newest addition to the NewTek fold, of course the much publicised Video Toaster. Who, then, are these people?

NewTek were started by Tim Jennison who still heads the company and is probably responsible for the zany attitude that exists in the quickly-expanding organisation. In common with many of the Amiga third party manufacturers, Tim is a technical guy whose infatuation with the Amiga began in the early days. He is still very closely associated with the design technology in addition to the mundane tasks of running NewTek. He is also seen promoting the Toaster at almost every opportunity, whether at computer shows, on videos or even local television programmes. Tim is the sort of "just to see if it works" kind of person; he recently cannibalised one of his children's walking dolls and added a MIDI control system to make it talk and move its lips in addition to moving around. I'm not totally convinced for whose benefit this was, however!

Visiting NewTek HQ is an experience to cherish – it's almost like going to

Disneyland except the atmosphere is more fun! Stuck out in the middle of Kansas, miles away from the mainstream of computing in California, NewTek were able to quietly develop their most famous



Video Toaster - What no Amiga?

products, namely Digiview and that Toaster thing, without attracting a great deal of unwanted attention. Until recently, the R&D crowd researched and developed in a separate building with a sign reading "Nuclear Waste Disposal Systems" hung ominously over the establishment. To reinforce this "kindly stay away" message, NewTek proudly proclaimed a safety record of 4 days since the last major nuclear accident, and displayed the usual anti-radiation rubber gloves, goggles etc. I suppose it's cheaper than an electronic security system and less to feed than some Dobermans. Nowadays, they live in an unassuming building in downtown Topeka, with the only tell-tale signs of something unusual being a pair of matching sports cars parked outside, but more of these later.

"Visiting NewTek HQ is an experience to cherish - it's almost like going to Disneyland except the atmosphere is more fun!"

Antique Tellys

Once inside, and used to the dark interior, one is faced with several plush offices and, of course, loads of Amigas, most of which have more than the usual amount of monitors, video recorders and cameras attached. NewTek also have some Mac things so they don't have to tie up their beloved Amigas on ordinary tasks such as word processing. Everywhere you look there are old televisions, and I don't just mean old as in those early colour TVs without remote control that had to "warm up" for half a day before viewing was possible. No, Tim Jennison (el Presidente) has many eccentricities and being unbelievably wealthy can indulge in collecting antique tellys.

Most of the design work and programming now gets done in the area called Alcatraz, but there was nobody in when I was there, the reason being everyone was watching the raw feeds being received by CNN from their reporters in Moscow via a huge satellite dish on the roof. "Was this a normal day's activities", I asked Kiki Stockhammer. "Oh no, we only do this when something important like a war or revolution is going on", she replied while passing around the popcorn and serving (soft) drinks. Typical.

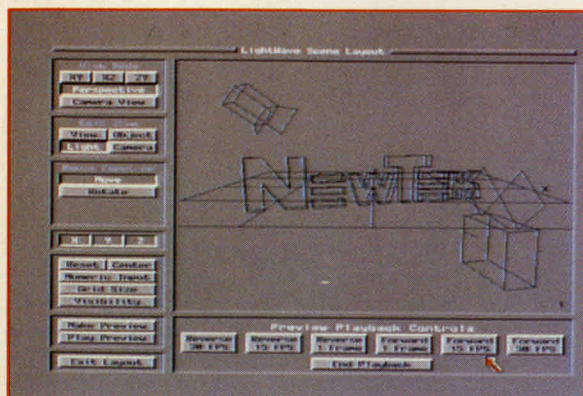
The Evil Zone is an interesting room full of arcade games where the NewTek slaves can let off some steam with a blast of the original Star Wars. My guess is that it's only a matter of time before virtual reality machines grace this hallowed arena.

NewTek are currently in the process of making their own promotional video to show off the Toaster to anyone who has been in a coma for the last six months. Personally, I think they just enjoy messing around and calling it work. Star of the show (after the Toaster) is Kiki, and although unable to give me her job title (a deliberate policy, don't ask me why, maybe they just take turns to be boss) she seems to have some kind of multiple personality, appearing in all manner of guises in the video, from newsreader and weather forecaster to model and dancer. NewTek are justifiably proud that this video, the preliminary cuts of

FIELD REPORT

MADE IN THE USA

Hitting Toasterville CONTINUED

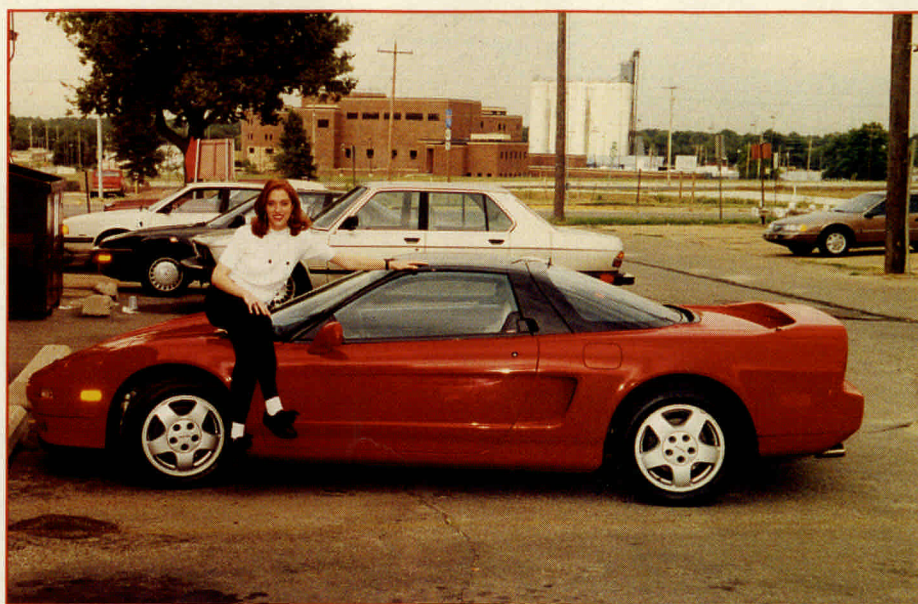


The Video Toaster's on screen allows for simple operation: just point and click with the mouse. This main interface screen is not only the Switcher/DVE slice; it also acts as the gateway to all of the other Toaster slices.



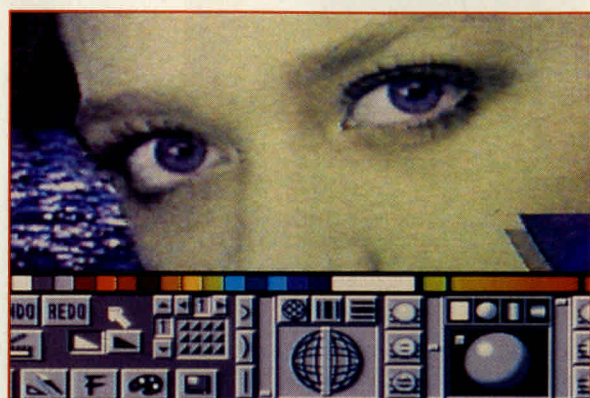
which look very professional, is made entirely in-house, with the new version of the Toaster software. Indeed, NewTek are so taken with this video making lark that they are currently building their very own full-featured studios, filling it with top quality kit, and the odd Toaster. The future should bring some even more amazing demos from this stable, but NewTek are also looking to produce videos commercially, possibly with the help of their old friend Todd Rundgren who has just announced he is setting up a company called NUTopia to make promotional videos using the Toaster. NUTopia certainly have an interesting array of people working for them in addition to the main man. Also in this company are Allen Hastings, author of Lightwave 3D the Toaster's graphics package, Ron Thornton, creator of special effects for films like Terminator II and Spaceballs and John Sanbourn, an award winning video artist in the United States. With that pedigree and a "special arrangement" with NewTek, this bunch should be difficult to hold back.

"\$3995 gets you a 'self contained system requiring no host computer', but us Amiga users aren't fooled for one minute."



Kiki Stockhammer and the NSX car.

"Star of the show (after the Toaster) is Kiki, although unable to give me her job title (a deliberate policy, don't ask me why, maybe they just take turns to be boss)."



Toaster Paint interface allows you to colour and manipulate the image with a variety of tools and in 16.8 million colours.

Trojan Horse

Readers of *AUI* will remember Todd used the Toaster setup to produce his own video for "Change myself" and was so taken by its power/price performance that he ended up doing the entire production on his own, with the assistance of about 10 Toasters after only a quick demonstration at an Apple Macintosh (yes, that's right) show. NewTek had sneaked in their new wonder product under the name of Trojan Horse, with a Mac II pretending to control the hidden Amiga and its box. Although this sneaky two fingers to the establishment approach generated quite a stir for NewTek once the truth broke out, the whole thing has gone full circle as NewTek now licence the A2000 from Commodore, putting their own "Video Toaster" badge on it. \$3995 gets you a "self contained system requiring no host computer", but us Amiga users aren't fooled for one minute - an A2000 with a hard drive, some extra memory and a Toaster is still a mean machine for playing Lemmings - even if the fancy 3D software (LightWave 3D) won't run as it needs an accelerator and number cruncher! For a remarkable \$8995, you get an A2000 (sorry Toaster Workstation) and a 50 MHz 68030/68882 combination, with, wait for it, a Mac interface. NewTek decided that because the Toaster technology could not be warped to suit the Macintosh (or PC for, that matter) envi-

ronments, they would mimic the Toaster interface on a Mac, which then sends the Toaster Workstation its instructions down a serial wire (exactly as if they had been entered on the Amiga). Mac people, smug in their "mine is the best cos it's so expensive" little world, can now utilise Toaster power without ever leaving that boring monochrome user interface they are so fond of. Nice one NewTek - if you can get away with it, then good luck. Maybe they should include instructions on how to get the Toaster Workstation to play Lemmings and further educate the Apple universe!

PAL and NTSC simultaneously

I know all you people out there are desperate for a piece of the Toaster action, but I tried, honestly I tried. I asked every spare member of NewTek about a PAL Toaster, but there is virtually no hope of seeing one for at least a year. NewTek are so busy enhancing the existing NTSC thing that the European and Australian PAL markets (who cares about SECAM?) are going to have to wait. Mark Randall, the marketing fellow at NewTek told me that PAL people are not being ignored, but NewTek have plans to develop an enhanced version of the hardware over the next year or so. I reckon they're already working on it because they wouldn't let me in some bits of NewTek HQ, so I can speculate that the next

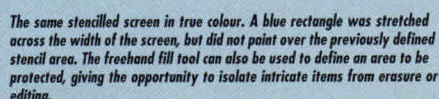
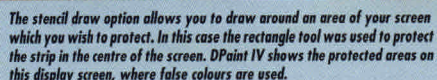
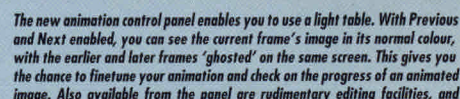
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DPaint IV

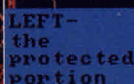
Peter Lee has been busy probing the mysteries of DeluxePaint IV, the new graphics superstar on the Amiga horizon. Here are his tips and tactics to help you get the most out of the latest in the Electronic Arts series.

Ranges on version IV of the program have undergone a major upgrade, allowing greater control over colour spreads than before. The way of achieving this looks more complicated than it is, especially when the range requestor gives

The newcomers are: Line, Shape (which are additional linear gradients).



Most creative of the new commands, to my mind, is translucency. This determines how 'seethrough' your brush or fill is going to be. It is controlled from a slider bar, and works on a percentage of your image; at 50%, it will be half transparent, and at 100%, invisible. Using this tool while painting with a clipped brush will paste the image over the background so you can see the image 'underneath' as it were.



MENTOR

DPaintIV

C O N T I N U E D

This is a standard feature of the other HAM packages, but novel to DPaintIV. With it you can create glass objects which actually are transparent; use the spare screen to draw your glass object in normal colours (light blue is best), cut it out as a brush, then flip to your main screen and paste it down with translucency set at around 5060%. The image will be transparent, but visible because of the original blue colour.

To improve on the effect you can add light highlights to the object by painting in white with a high value (say 70%), building up your colours by repeating the process. Reflections are also well catered for by flipping your object and pasting down with a low value (around 40%).

In a similar way, shadows can be created by using either a copy of the object set to black (press F2 with black selected from the palette), then placing it down with a low value. Do this before pasting down your original object though.

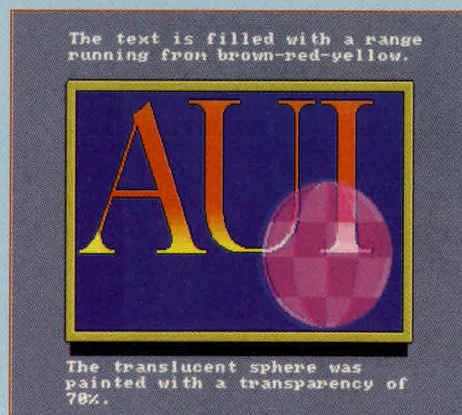
Changing the colours of an image can also be achieved with the Hue, Value or Tint options. Bear in mind that if, for example, you want to rosetint a black and white low resolution image, your red must have a range from light to dark so that the computer can replace like with like (ie midgrey with mid red, dark grey with dark red etc). This is taken care of for you in HAM mode.

The Value option is a quick way of either lightening or darkening areas of the screen, and can be used for highlights or shadows, depending on the darkness of your current brush.

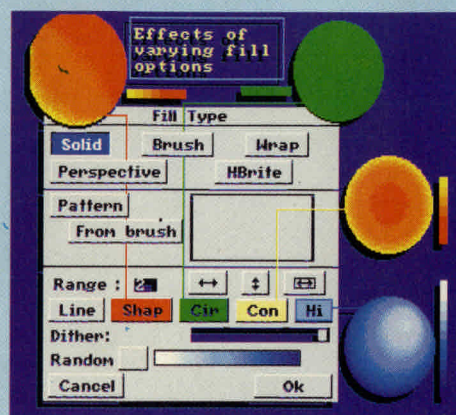
Here the light table is enabled, showing current, previous and next frames of a logo animation which expands from the centre of the screen. Additionally the spare screen is ghosted through, to see how the animation will look after the spare image has been merged onto the animation, which is painted on a featureless background.



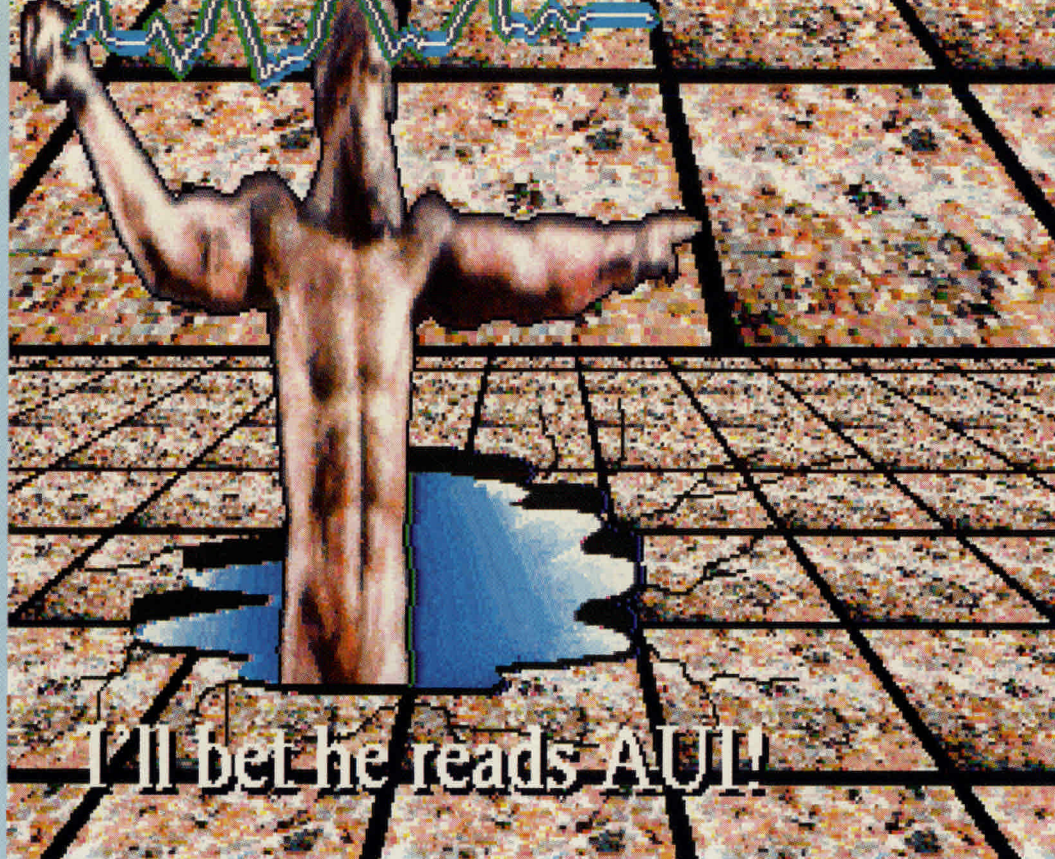
Translucency allows you to overlay brushes over existing objects, here simulating a transparent patterned glass sphere. The lighter edge, added for 3D emphasis, was created with the open circle tool using a medium sized white brush with transparency on.



New fill options have been added to DPaint IV, giving subtle shading effects when used with colour ranges. The range number (1 in this case) shows a blue to white transition; the other fill colours are in ranges 2, 3 and 4.



A simple screen showing how solid objects can be made to 'pass' through glass. The text was drawn first, then copied to the spare screen. Then a blue area was drawn using the freehand polygon tool, with a high trans-



HAM mode allows you to import images from many sources. The receding floor was created using the same square marble brush used in creating the vase in the reflections picture. DPaint's perspective fill was used to lay the floor tiles, and the steep background was drawn in a similar way. The pool is filled with the shape option, using a range of blues, and the statue is from the Connoisseurs collection of grecoRoman artwork. The energy bolt is simply a jagged white line outlined in various colours.

"Reflections are also well catered for by flipping your object and pasting down with a low value (around 40%)."

New to the program is the global effect of antialiasing; with this enabled (either to low or high) painting with custom brushes is slowed down considerably as the program smooths the edges to give a more pleasing effect, and minimises the effects of jagged angled lines. Antialiasing is vital for rotational animation work or perspective manipulation, otherwise it is too time consuming for anything but prime output.

Animation, introduced in DPaint III, has been beefed up for the new version, and now includes fullblown professional tools.

Users now get an animation editing panel featuring 15 control buttons. You can guide your way around your sequence a frame at a time, play it in a variety of ways, and add and delete frames.

A very powerful function is the Light

Table, which allows you to see your current frame, with previous and next frames 'ghosted' alongside (except in HAM mode). You can also 'ghost' the spare screen too (S button), to allow you to check positions of backgrounds which you may want to merge once the bare animation is finished.

"Animation, introduced in DPaint III, has been beefed up for the new version, and now includes fullblown professional tools."

Animation pseudos call this onion-skinning, and it was a big selling point for the lackluster Disney Animation Studio; now DPaintIV has outdone it! But things tend to slow down a lot if you



One of the unsung attributes of the program is its ability to convert images from one mode to another. For example, this HAM interface CDTV image was loaded into HAM interface mode, and the colour text added. The text has its own palette, so was set down as a brush on the spare screen, clipped, then the main image loaded. The brush, displaying alien colours now, was simply remapped. The whole picture was then switched to 64colour halfbrite mode, when the program did its best to maintain the colour integrity which it did remarkably as you can see.

have all the light table options on at once.

Falling into the nearmiraculous category for a program this cheap is the brush metamorph option. I can forgive almost any shortcomings with DPaintIV (and there are several) thanks to the inclusion of this dream come true.

"DPaint III's 3D animation was impressive enough, but I'll guarantee the brush metamorph option will attract more interest than anything else. It's a delight."

Why all the excitement? Simply because the ability to change one brush to another over a series of animbrush frames puts the home professional's work one step nearer the highend of the market.

DPaint III's 3D animation was impressive enough, but I'll guarantee the brush metamorph option will attract more interest than anything else. It's a delight for transforming one set of text to another, and when used with digitised images gives a wonderfully smooth, melty transition. Forget the old chicken into an egg routine, how about a model T Ford 'evolving' into a Capri Ghia or a biplane melding into a Tornado?

Strictly for fun, you can also change a picture of someone into someone else; the way the program works out the route and changes of pixels is not always a hundred percent, but I am not complaining.

FINALLY

My feelings about this new incarnation? A mixture of joy and sorrow really so much done, so much more to do.

Grumbles and groans

Not everything in the DPaint garden is lovely... and here's why:

there is STILL no lasso cut; you have to cut out a nonstandard shape by creating a series of lines.

One absolutely grindingly annoying feature of the program, right from the start, has been its inability to extend tools beyond the righthand menu strip. If, for instance, part of your filled circle goes offscreen (supposedly 'under' the tools menu, you might expect it to be drawn. Wrong! it's still cut off in its prime, as are other tools, from brush clip to fill. Pressing F10 to get rid of the menu is not good enough.

There is still no path animation (wouldn't it be nice to draw a path and have your brush follow it?); you still cannot flip anim brushes left/right or up/down. There is no 'repeat draw' option vital for building up blends in HAM transparency, and lastly a total disregard for ARexx.

If you have ever had to repeat operations many times then you will appreciate the ability ARexx gives you to create macros which can be called as needed. A lot of professional software comes with ARexx support now, and to compete, all will have to feature it at some point.

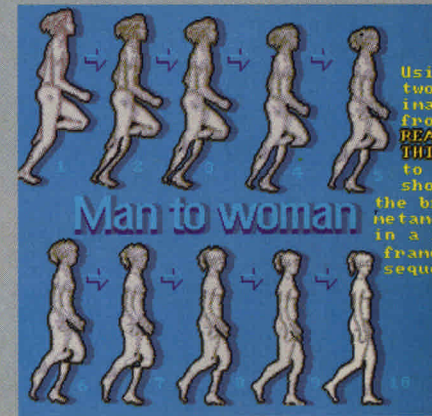
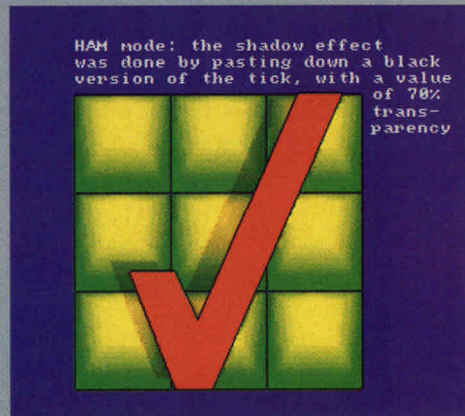
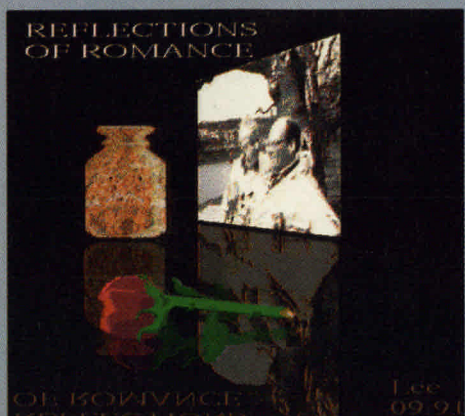
But if there weren't any holes in DPaint IV, there'd be no money to be made on DPaint V would there... or is that being too cynical?

parency. To give the depth effect, portions of the two Ls were clipped from the spare screen and pasted on the original to replace the bits which were tinted blue when the sheet of glass was painted.

Using the translucency feature with a flipped brush gives a stunning coffeetable reflection. This is HAM mode at its best, combining a black and white digitised image with multicolours. The vase was crafted using a square marbreeffect brush wrapped around a freehand shape. The highlights were added by using a white brush at high transparency. The rose was drawn freehand in 32 colour mode and loaded in as a brush, then remapped. Due to the lack of speed in HAM mode, it's advisable to work in one of the faster modes, then import images into HAM later.

There are many ways of creating shadows in HAM, but I find this best for complex shapes; cut out the image which needs the shadow, change it to a solid black colour (F2 with black selected in the palette), then paste it down with a high transparency. Then add the main image, slightly offset. The pyramidshaped background, incidentally, is a simple rectangle shape filled with a linear gradient fill using a range of yellows.

The brush metamorph option has plenty of frivolous potential such as this automatic sexchange, using items from the invaluable Real Things art library, which we've featured in AUI. Here a man transforms into a woman in 10 easy stages, the animbrush stamped down successively to show you how the program worked out the inbetweens.



PICTURE THIS WINNER!

Well, you certainly Pictured It! We received loads and loads of very spectacular pics for our competition.

The competitors aged from 11 to 74 years, and the disks and photos came flying in from all over the world in our very special graphics competition. Many were of a very high standard indeed and the winner was chosen only by a tiny short head. We will be telling you more about all the 13 winners – the first and the 12 runners-up and publishing the cream for you to see in December *AUI*.

TALENT!

Using an Amiga A500 with 8 Megs of memory, a Pandaal DataScan, a Minolta SRT101 Camera, Deluxe Photolab, and barrelfuls of artistic and graphic talent, N.C. Whitehurst created this HAM picture which was awarded the top prize. The judging panel was headed by Consultant Art Editor Graham Baldock (see his own expert Amiga performance on page 32).

The barge was photographed and scanned in very slowly at 400dpi. The clouds were scanned in from another photograph and pasted onto the screen. It was then retouched using Pandaal's software and then transferred into Deluxe Photolab for final processing.

N. C. Whitehurst will be receiving the Canon Ion camera as a justified award for his excellent picture and clever use of the technology.

Watch out for next month's *AUI*, when all the prize winners will be shown in their glory in a special Amiga Art gallery.



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All entries must be original, lo-res, no more than 32 colours, supplied on disk. Employees and directors of Maxwell Consumer Publications, participating companies, and associated or subsidiary companies, or their agents, together with members of their families, may not enter this competition. Anyone else can enter. There is no cash alternative, and the judges' decision is final.

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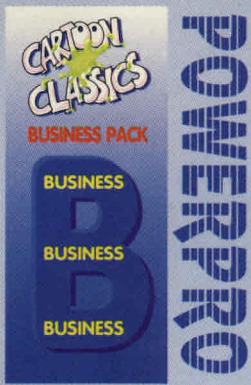
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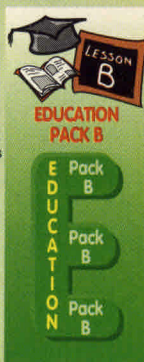


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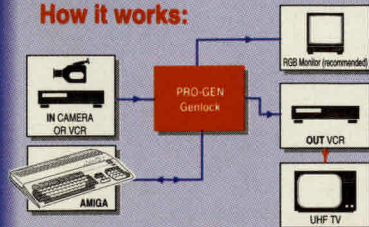
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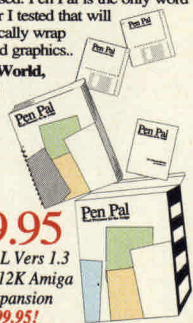
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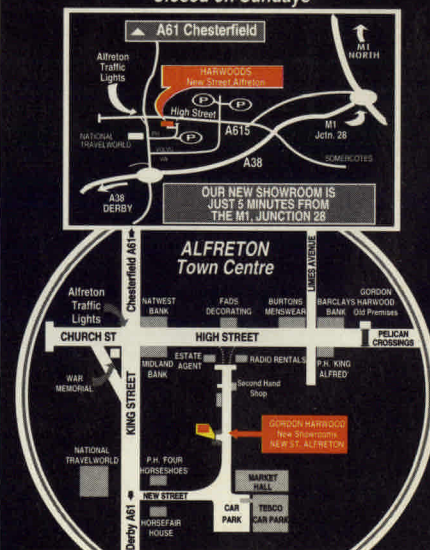
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The Closer you look, The Better we look.

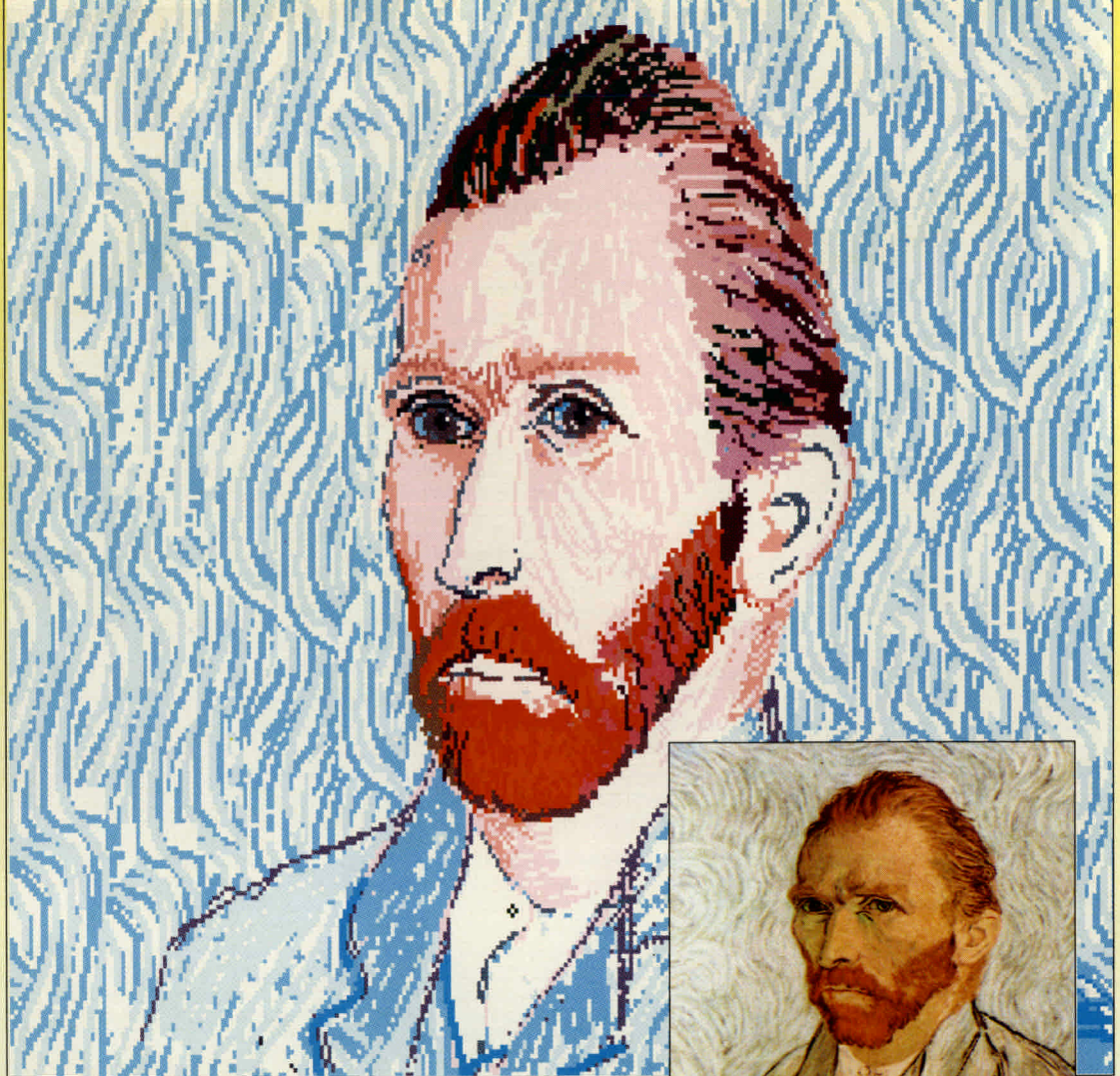
USER PORT

Taking a basic one meg Amiga and DPaint II, art editor Graham Baldock shows you in the first of a fascinating new series how to create great art of your own. "You, too," he says, "can make computer impressions live and become a master of the art"

Part 1: Impressionism

When your Amiga first arrived in its box, and you feverishly tore away the packaging, plugged all the bits and pieces together and started to use the 'free' software which came with it, you no doubt, like me, were truly impressed with the amazing graphics capability of the 'D Paint II' disk which came with it. The user friendly handbook explained about the mechanics of creating your own graphics and pictures and I'm sure you had plenty of fun experimenting with it.

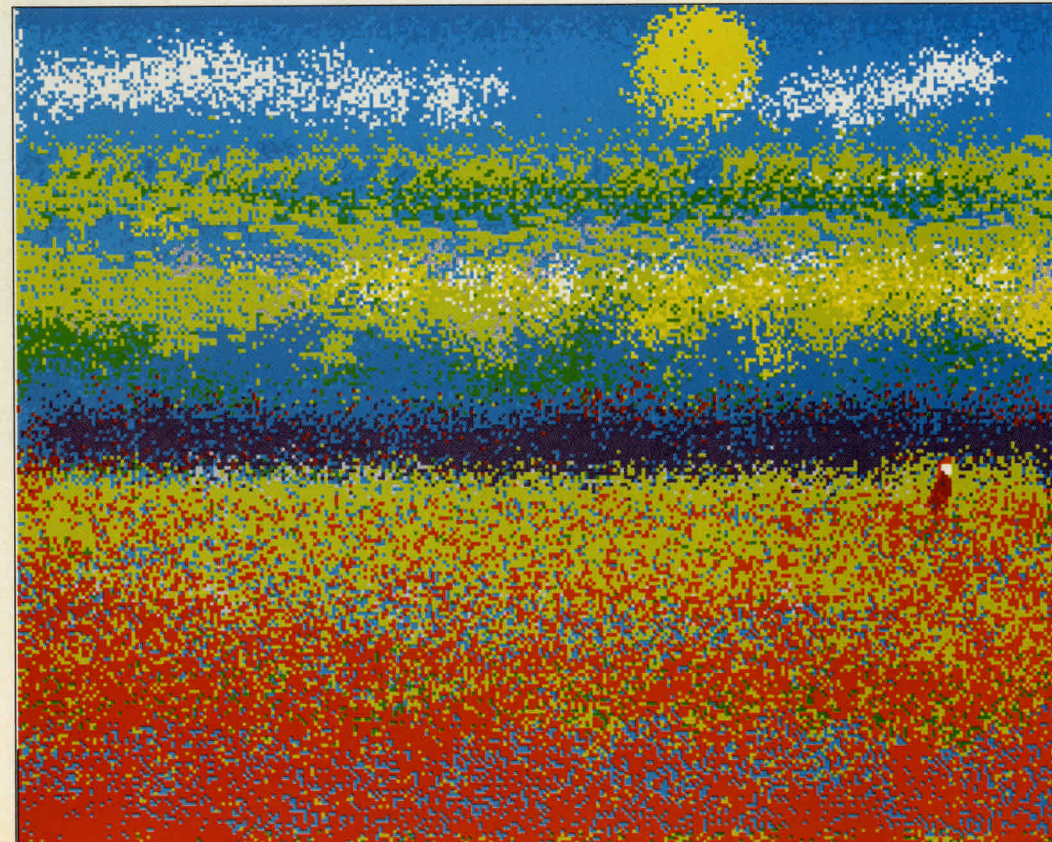
After a while however you probably became aware of the proliferation of add-ons you are exhorted to purchase to enhance the scope of the machine. An extra megabyte of memory here, a hard disk there, a desirable extra disk drive etc. But so many of us are already so far stretched buying the, admittedly ex-



Van Gough's 'Portrait of the Artist'

MASTERING AMII

Graham Baldock always wanted to do artistic impressions and this month *AUI* gave him his chance

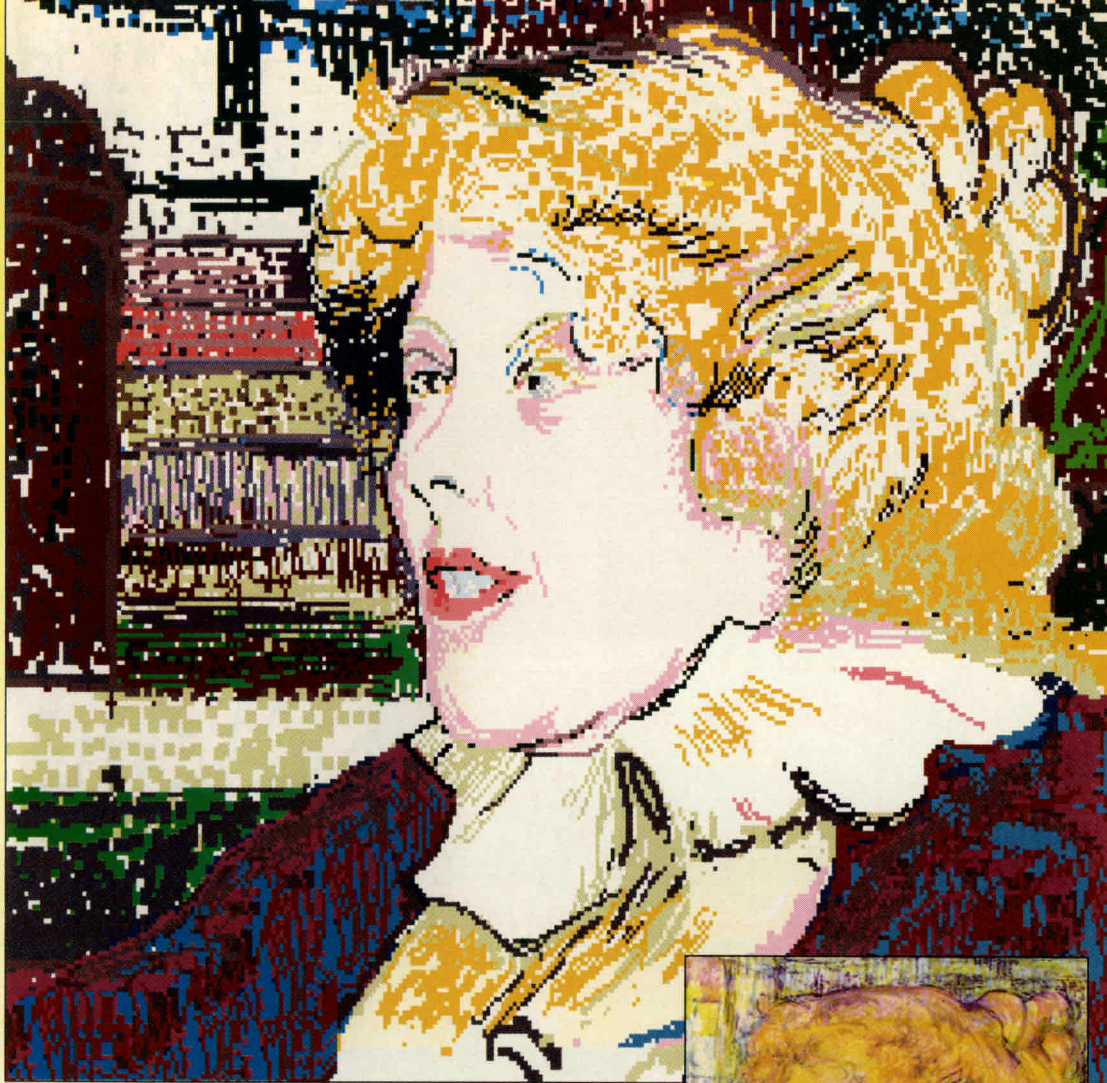


tremely good value Amiga, in the first place, these extra goodies will most probably have to wait until a birthday or Christmas comes around.

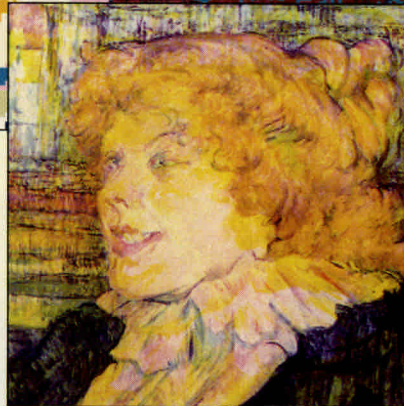
Just this point came up while I was in conversation with a young Amiga user a few weeks ago, and as I was about to start on a series of Amiga Art pages I thought this would be a good time to introduce you over the next few months to a way of producing your own art on your Amiga which perhaps you may find interesting and which won't cost an arm, a leg or a scanner!

Fine art painting techniques have varied in style tremendously over the past 500 years and none more so than at the end of the last century when the Impressionist school of Art was in its heyday. The techniques used by these innovators could have been tailor made for the tools and commands at your fingertips which D Paint gives you and once you have followed my guidelines and become proficient in a particular style, there is no reason why this new found talent cannot be

My own interpretation in Pissarro style - 'Poppies'

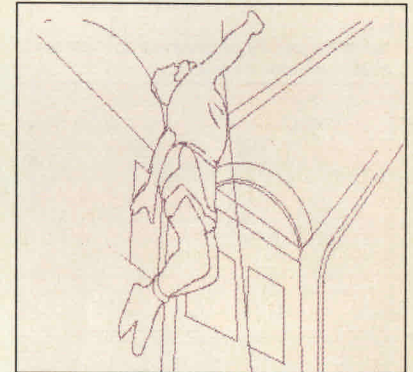


Henri de Toulouse-Lautrec's 'English woman at The Star, Le Havre'



GETTING STARTED

- 1** Choose the painting you would like to copy and get it enlarged on a photostat machine to the size of the D Paint 'canvas' on your monitor screen preferably in colour, but it's not really necessary.
- 2** Cover the painting with a sheet of acetate, tracing paper will not work, and trace off the main areas using a felt pen.
- 3** Load in the D Paint screen and change the background colour to the second colour in your palette which should be white, and then cover the screen with the acetate so it is held at the top of the monitor with some sticky tape.
- 4** Choose a pale grey from your pallet and with the fine line tool trace in a light grey line exactly lined up with the felt pen on the acetate. Save the outline drawing straight away as you can always start again if your painting goes wrong.



Cover the screen with acetate and 'trace off' the main areas of the painting with a pale grey line.

- 5** Determine the main colours and shades you will need and customise your palette accordingly with the spread command. This saves a terrific amount of time later on. ▶



Fill in the main areas with bold strokes of colour.

GART



put to good use producing computer paintings of your own. Perhaps copying and interpreting a photograph of a member of your family or translating a view using your new technique. The possibilities are virtually endless, and Amiga User International will (be holding a competition) be delighted to see some of the results of your labours and the best may even find their way onto our cover disk for all our other readers to see.

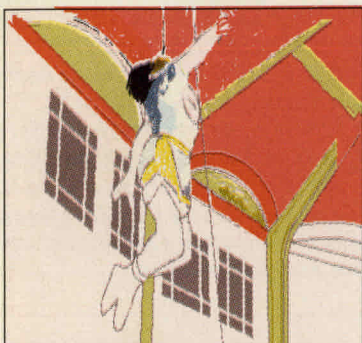
To whet your appetite, and get your creative juices flowing, I have produced five pictures in the various painting styles of Degas, Van Gough, Toulouse Lautrec and Pissarro, together with a blow by blow description of how you too can become an 'Old Master.' None of them took more than a couple of hours to produce and with more time, care and attention to detail, I'm sure that your results can be and will be much, much better.

USER PORT

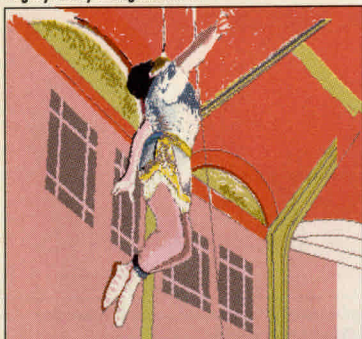
GETTING STARTED

C O N T I N U E D

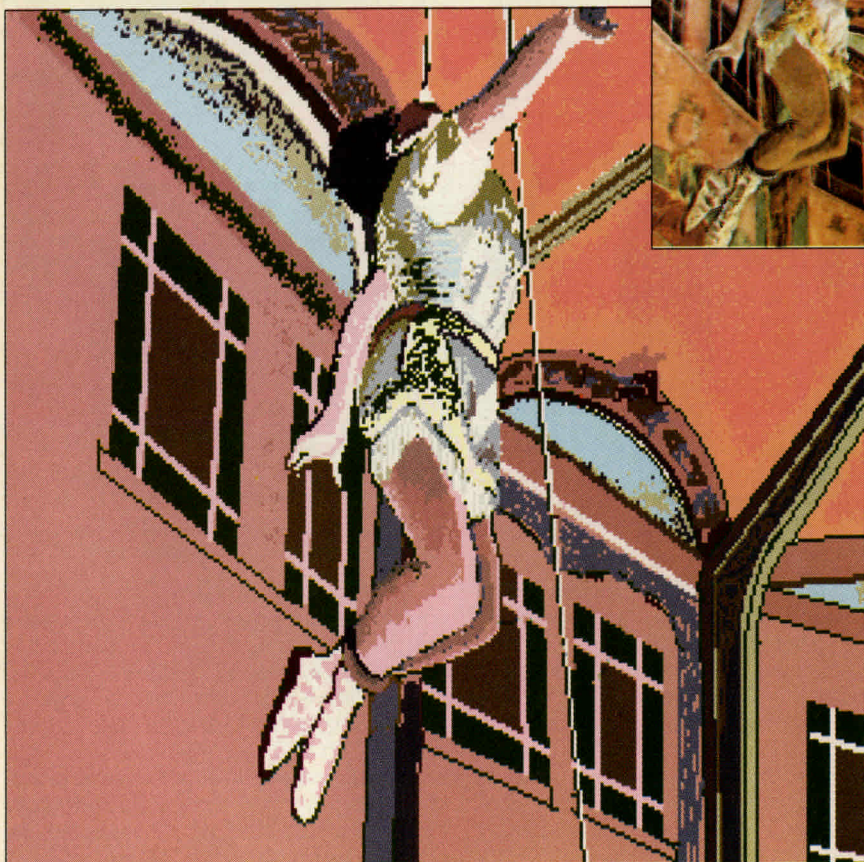
6 Much as the original artist would have done, fill in the main areas of the picture with broad sweeps of colour using either the fill facility, the various sizes of inbuilt brushes or in the case of Pissarro, go straight in with the spray tool. It doesn't really matter at this stage that the colour you use may be a few shades out, as this can be corrected on the final frame.



Start filling in areas of detail and add small objects with the magnify facility adding fine detail.



On the last frame, correct for colour.



Pissarro's 'Woman in a field' and various stages in between



Degas' 'Miss Lala at the Cirque Fernando'

Within minutes you should be able to see some quite exciting results and if you pay particular attention to light and shade, you should very quickly produce some staggering results. But remember to save your picture regularly, renaming it each time, so you can go back at any stage to correct any faults.

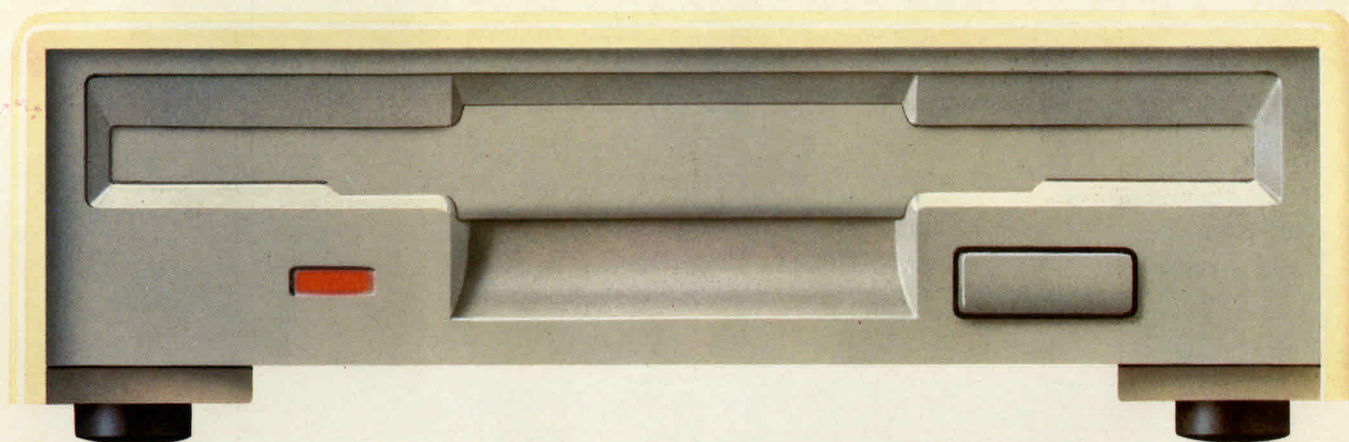
Fine detail and foreground objects, such as the woman in the Pissarro, or the rope in the Degas picture, can be left until the last half of the painting, and this is where the magnify, blend and smear facilities are so useful. The exact hues of the colours should be left until the very last frame, when you need to keep looking at the original painting and back again to your monitor to establish the correct 'feel' for the work. Go on - blow their socks off!

Once you have established which of your artists styles you like the best, copy as many of the paintings as you can, and I promise you that within weeks you will be able to become a very proficient computer artist in your own right. I'm sure that if the majority of the old impressionists were just starting out today they would without doubt use these or similar methods to do their preliminary drawings, and remember scanners wouldn't be used, as they would be creating serious, original art from scratch!

Who knows, but you may very well discover a technique all your own and even make money with it. Make Computer impressionism live!

Next month - Clipart Art! How to make the very best from what you can buy on the Amiga.

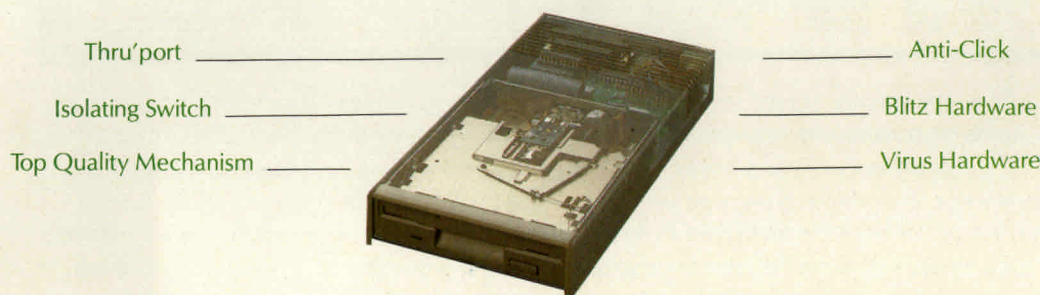
Where you can stick it.



Viruses, disk swapping, clicking drives, disks which won't back up. Is there no end to the whingeing of the Amiga user?

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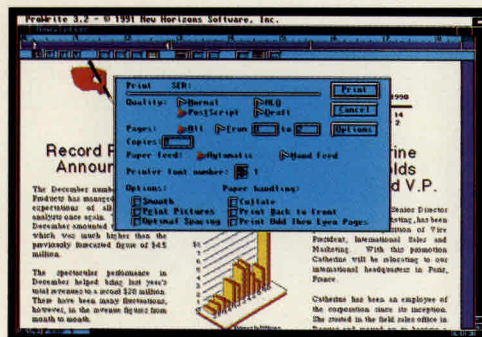


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USE ANY AMIGA FONT	✓	✓	✓	
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DIY 2000

USER PORT

The Amiga 2000 offers far more possibilities for expansion than the ordinary A500. Gary Fenton shows you how to get those 2000 advantages on an A500 by making your own 2000 slot.

Yes, it's quite easy to make a real 2000 slot for the A500. Take one shoe box and an egg carton...

Well, maybe not quite so easy as that. But it isn't too difficult for anyone to do. But remember as in any DIY project, you do it at your own risk!

This DIY project will convert your current A500 86 pin expansion slot into one 2000 compatible slot. You may know that the 2000 slot has 100 pins and not 86. What this clever circuit does is listen in to pins 16, 14, 15, 53, and 74 of the A500 86 pin slot, and then creates the correct signals for pins 92, 93, and 94 on the 2000 slot. By the way, did you know that some 2000 cards will work fine from an 86 pin slot? However, we don't recommend you try it.

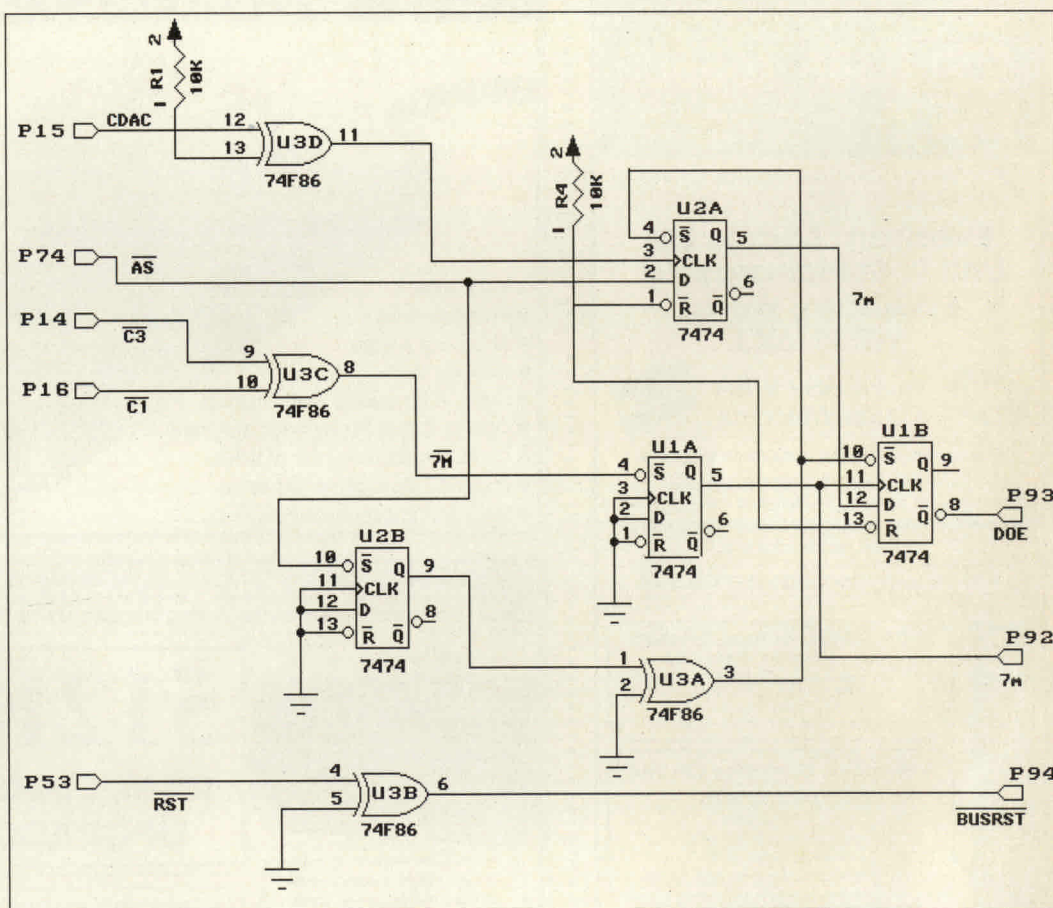
"Did you know that some 2000 cards will work fine from an 86 pin slot?"

The vast majority of 2000 cards will work happily with your DIY 2000 slot, except accelerator cards. This is because only a 7MHz signal is produced and nothing else that an accelerator card needs. Cards such as ICD'S AdSCSI, which is a fast SCSI controller with an optional 8MB RAM on board, will work and so will many other cards. That's the good thing about the 2000. You can get a great deal of expansion that's usually cheaper than an A500 equivalent. Obviously, you will not be able to fit a 2000 card inside your A500 after you have made the 2000 slot. It will look ugly sitting naked outside your beautiful machine, but firms such as Maplin can supply you with a case big enough for the card.

Many thanks to James Campbell from Checkmate Digital who supplied the original circuit and plenty of help.

"Watch Those Pins"

Make sure you earth the following pins: 87, 88, 89, 90, 91, 99 and 100. On the 86 pin connector, you need +5 volts on pins 5 and 6. You also need ground on pins 1, 2, 3 and 4.



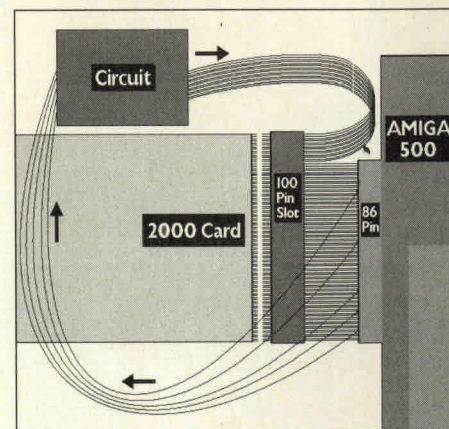
This is the basic idea behind the DIY 2000 slot.

"What You Need"

You will need the components below which are available from most good electronics stockists.

- 1x 74F86 IC
- 2x 7474 ICs
- 2x 10K resistors
- 3x 100nF capacitors
- 1x 100 pin slot
- 1x 86 pin slot.
- 1x coffee (black)

Solder, wire and a clean circuit board.



Just a note of friendly warning. We've tried to make the diagrams and explanation as clear as possible but if you don't understand them, don't try it. Ask someone who does. Probably you wouldn't do any harm but we won't take responsibility if you do!

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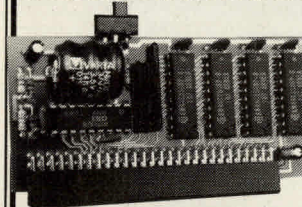
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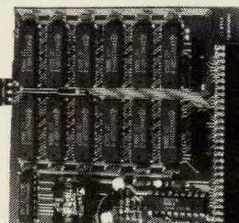
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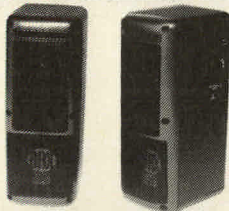
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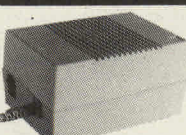
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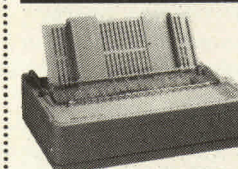


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Mice aren't for everyone. I should know, I hate the things and have been using a trackball for the past few years. In fact I've got quite proficient with the Marconi, and like nothing better than to while away the hours playing with a paint package with it sitting on my lap.

However, like most people, I wasn't taught to write or draw using a trackball. Perhaps it was a tad old fashioned, but in my primary school, pens, pencils and crayons were de rigueur.

There are two computing equivalents of these more understandable devices - the light pen and the drawing tablet. The former has thankfully passed into the annals of computing history along with the Cromenco Systems One and the Grundig Newbrain. I don't know if you have ever used a lightpen (or wand as some - more suspect - users call it), but don't. They don't work very well and always tire your arm out within seconds.

The digitising tablet is a far better way of doing things, as you simply drag a pen across the surface, clicking with the nib of the pen and a few buttons. Dead easy.

Unfortunately, until recently graphics tablets for the Amiga have been few and expensive. Now it seems this is about to end, for all of a sudden several tablets originally designed for the PC have become available. All seem to work through the serial port via a small adapter, and best of all their control software is totally invisible to the user.

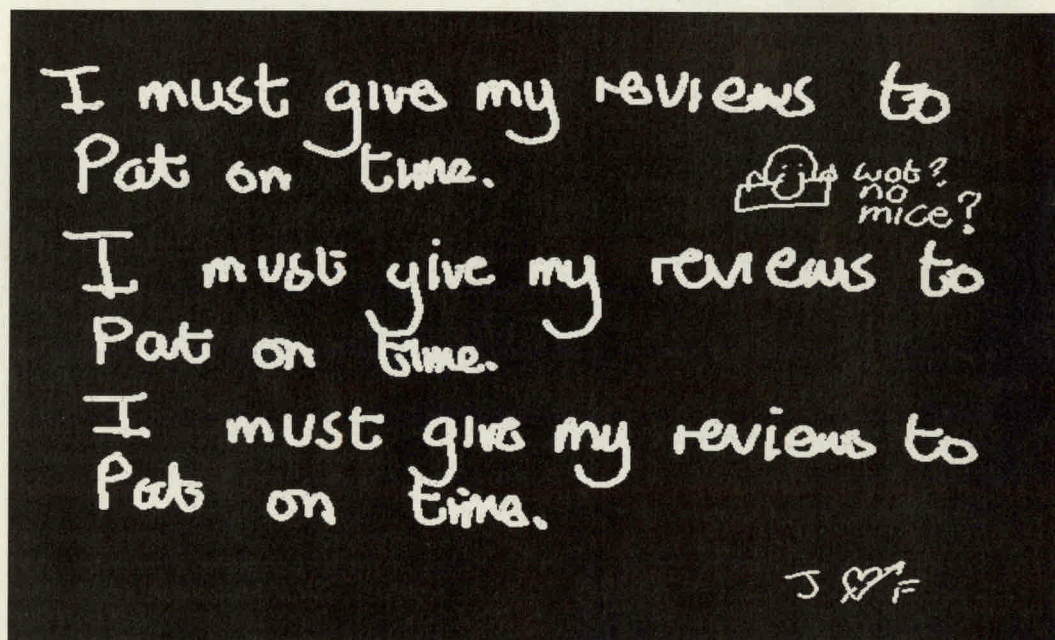
Take the Genitizer for example. It's an approximately A4 sized tablet (about the size of this magazine, with an extra inch added to the bottom) and sits perfectly on your lap (or beside your keyboard if you are on slightly less familiar terms with it).

To use it, you need only run a small program which can be placed into your normal startup sequence. After that, well you have a choice between your original mouse (or trackball) and your new tablet. You can use both interchangeably with no problems. This is great news, for it means you can use the tablet with your favourite art package. Datel must be able to read minds, for my tablet came with a template for Deluxe Paint. After lining it up with the gadgets on screen, I can choose brush sizes, inks and all the rest without looking up to the screen. It's a nice touch, and of course you can create your own templates if you want - they slip under a thin plastic sheet.

Using the Genitizer is great fun. Working via the serial port at about 9600 baud seems to make it run marginally slower than a mouse/trackball,

Genitizer Tablet

John Kennedy finds something which may convince him to dump his usual input devices and go back to paper and pen. It's just a pity he can't draw...



but not so you'd get upset. You can drag icons, move windows and pull down menus with a flick of the pen. It can genuinely replace a mouse for all everyday Intuition tasks.

Criticisms: the review model came with a 2 pin plug mains adapter. What a pathetic thing for Datel to do. Isn't it illegal in this country yet? Furthermore the mains adapter was rated for 220v. Datel must either change the transformer or at the very least supply a plug adapter. Taking an expensive peripheral out of the box and trying to find a mains plug is difficult enough, but having to nip down to the hardware shop to buy an adapter is just not on!

The only other negative thing I can think to whinge about is the rather small drawing surface of the tablet. Although the overall unit is magazine+ sized, the actual drawing area is about 10.5 by

"Datel must be able to read minds, for my tablet came with a template for Deluxe Paint"

14.5cm, which to those of you still operating in imperial units, is quite small. It's due the tablet being portrait rather than landscape orientated. Odd.

On the plus side, the Genitizer is very good value for money. It works well, and in fact if you are thinking of buying a new mouse/trackball, I'd give careful consideration to getting one of these instead.

It goes without saying that if you do a lot of drawing on your Amiga, you should get one as a matter of course.

Price: £129.99

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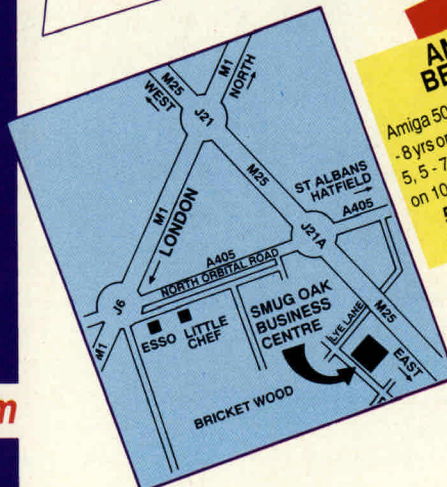
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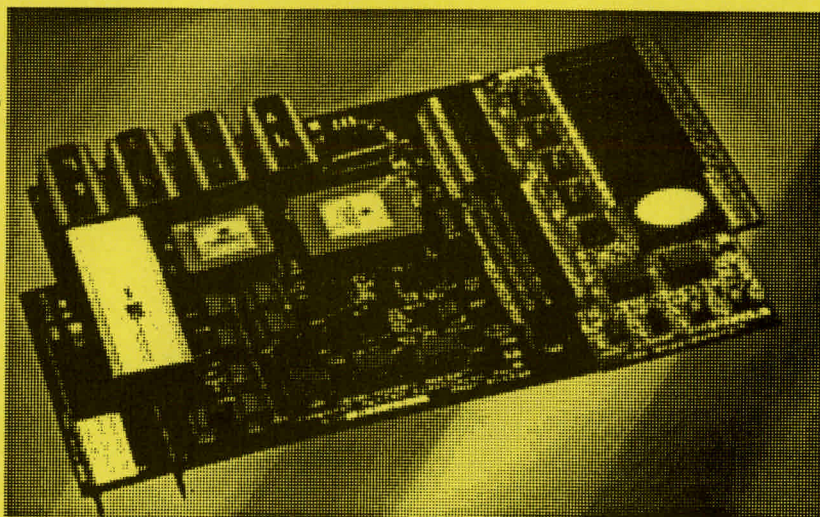
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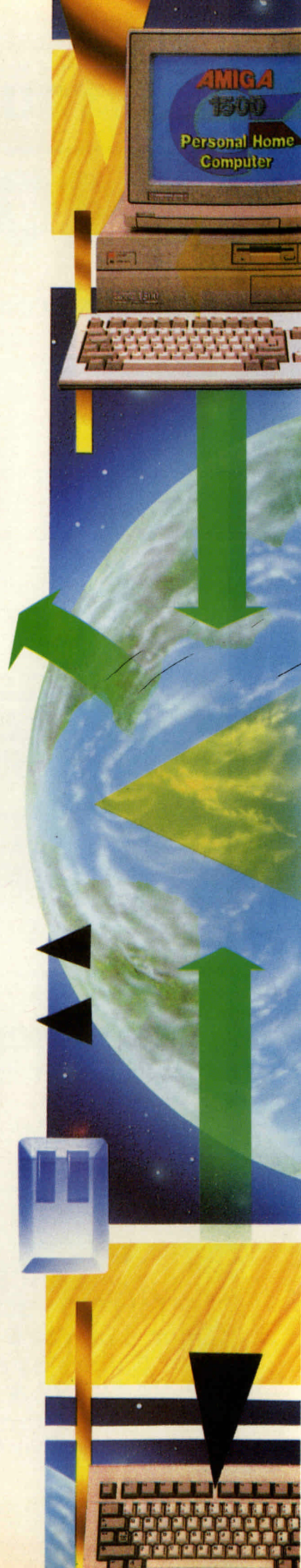
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TEST DRIVE

SupraRam 500RX

It's beige, it's tiny and it connects to the panel on the side on your Amiga 500. What is it? Why it's the SupraRam 500RX memory expansion, of course. John Kennedy test drives it.

As even Commodore have realised by now, 512K simply isn't enough these days. As they have started selling 1Mb Amigas as standard, you can be sure that you need more if you're going to try anything more complicated than running the Simpsons.

Any serious Amiga user (by which I mean DTP, video, graphics, music and programming fanatics) should have at the very least an extra 2Mb. Believe me

when I say that life begins at 3 megs!

For the 1500/2000 owner various options are available on plug-in cards, but spare a thought for the poor A500 owners who have been forced to use some very dodgy cards. According to one advert a particular trapdoor card" needs an extra connection to the gray chip" (sic). If they can't even word their adverts correctly, I have serious doubts as to their electronic skills.

The intelligent Amiga owner will want several things from a Ram expansion. He/she will want reliability, auto configuration (no nasty software patches to fiddle with in a startup sequence), good expansion capabilities, external power options and preferably all the above in a small beige box.

The SupraRam 500RX has all these features, including the extra small wedge shaped box. The size of the box (only about an inch

wide) betrays the type of memory chips used: ZIPs, or Zig-zag In-line Packages, which means they are very thin and have all their legs on the underneath instead of on both sides in the more usual beetle-type shape.

Two courses of expansion action are available. First you can use 256Kbit x 4 ZIP DRAM chips. Each megabyte of Ram needs 8 chips, which works out at about £100 for the full 2 megabytes of memory. Not bad - but it does fill all your slots.

A more sensible thing to do is go for the 1Mbit x 4 ZIP DRAM chips. Four chips will give you 2Mb and will again cost about £100. However, it works out that a full 8Mb of Ram will cost about £400, which not even I can complain about.

Remember that these prices are for the Ram chips themselves (using prices from Power Computing Tel: 0234 843388) and don't take into account that you need to buy the SupraRam unit in the first place! It usually happens that the more memory you buy with the unit in the first place, the more money you save.

I've used the SupraRam for several months now, sandwiched between an IVS hard disk (which

I would put some extra memory in if the cards were not so expensive) and an Amiga 500 in a CDL1500 box with two internal floppies. I'm pleased to say that not once has it misbehaved itself, nor hankered after any extra power. It just sits there taking up very little space and works fine.

I also managed to test the SupraRam with a Commodore A590. As the A590 allows for a maximum of 2Mb, compatibility is very important. Happily, everything worked fine and a 2Mb A590 and a 2Mb SupraRam made a predictable 4Mb when added together. Aesthetically the units didn't fit together as perfectly as they could have, with a nasty gap twixt drive and Ram, but with lots of big numbers on the Workbench screen I can usually forgive that sort of thing.

And at that point I'd end on a pun, except I think all the memory ones have been used up by now. Too bad.

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Pat Kelly has spent months engrossed in this latest development of a highly reputed database. Did he find it worthwhile?

Superb Professional

Precision's Superbase is not a new product, it was one of the first Amiga databases and it re-invented the way in which databases operated by using video recorder-style control buttons to view the file's individual records. There are now three Amiga products in the range; Superbase Personal, Superbase Personal 2, and Superbase Professional 4. The two "Personal" programs are amongst the best and are designed for, as their titles imply, the personal user. However, they have restricted functions and if you are in the business of graphic presentation and power-data manipulation their functions soon become limiting.

A full re-write of the original program resulted in the creation of Superbase Professional 4 Amiga which is derived from its IBM PC Windows counterpart. It is therefore possible to create an Amiga SBPro4 file and port it over to its IBM PC counterpart, and vice-versa. The basic operation of Superbase has not been lost in its re-written form and both the video recorder-type control buttons and the general feel of the package have been retained. So it is not surprising that 1 Megabyte of memory is required, but 2 Megabytes recommended, as is a big-in-storage hard disk drive.

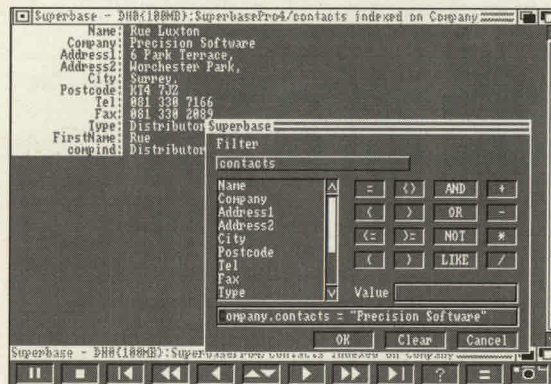
Aesthetically, SBPro4 is impressively packaged and it comprises a Program disk, an Examples disk and 2 hefty A5 ring-bound manuals; one for the database, the other for the forms designer, the DML programming language and an applications guide.

The manuals are very detailed and, with their guidance, it takes little more than a few minutes effort to create a simple card type index database using the pull-down menus, dialogue boxes and buttons to select from the available options.

Files

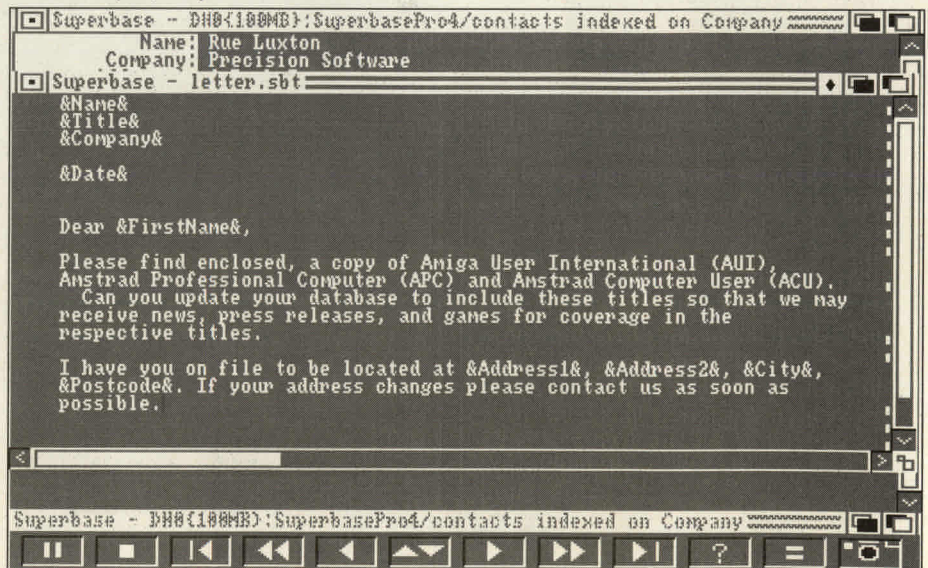
When creating a file, there is an option to incorporate a password into the database,

giving its holders access to three different levels of functionality. These levels are: READ ONLY which allows viewing of the data; READ AND WRITE which allows modification of the data; and DELETE which provides total control over the database and its structure. If no passwords are defined, files will load without a password requester and full control over the database is automatically granted.



Filters offer the useful function of limiting which records to view. They can also provide a quick way of finding contacts for known companies, or companies for known contacts etc.

"It takes little more than a few minutes effort to create a simple card type index database using the pull-down menus"



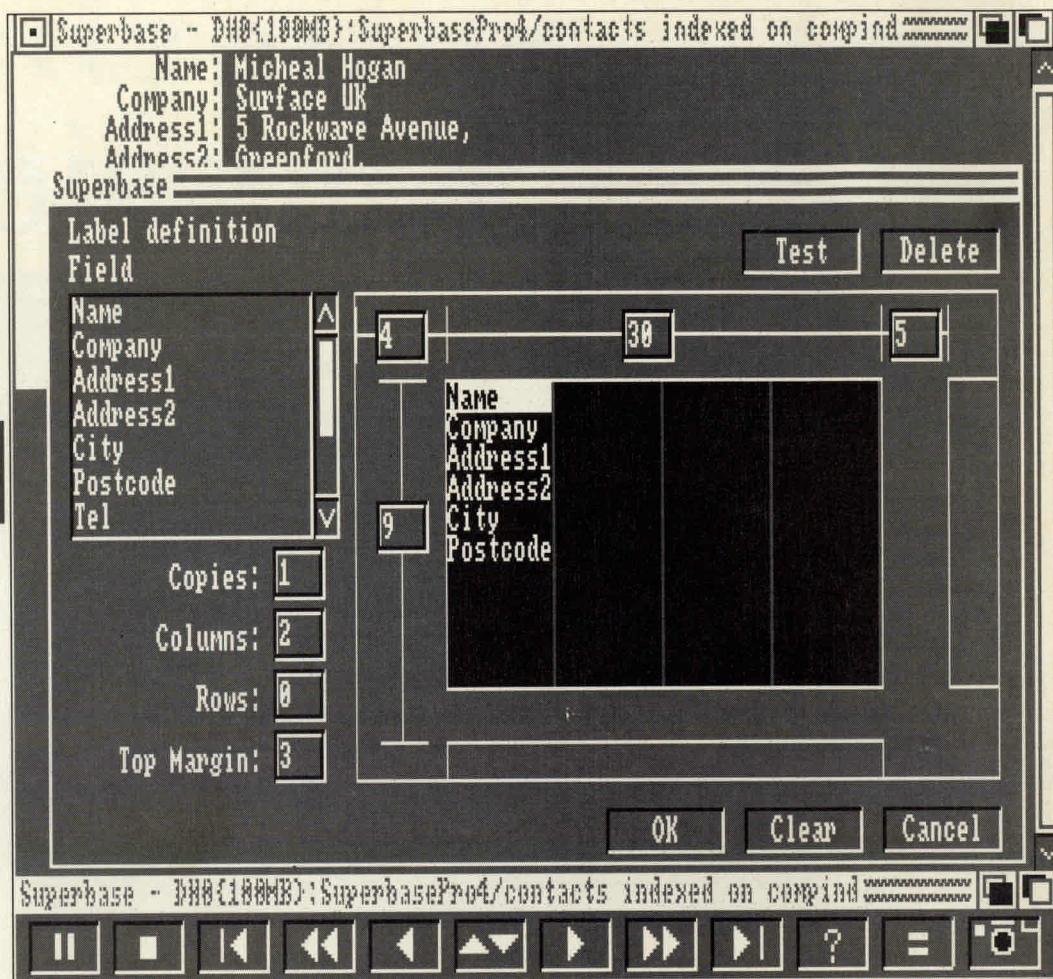
The text editor is handy for small external text files and, as shown, mail merge documents.

The quantity of records within a file is limited only by memory, as is the number of fields within a record. Although fields can be added and modified at anytime after the creation of a file, it is worth noting that reorganising the order in which the fields are constructed within a record without disrupting the database's data can only be achieved manually. This operation is not recommended, so it is best to know exactly what order of field data is required from the outset. This is more important than it first appears, as you may only export data in an order respective to the file's structure.

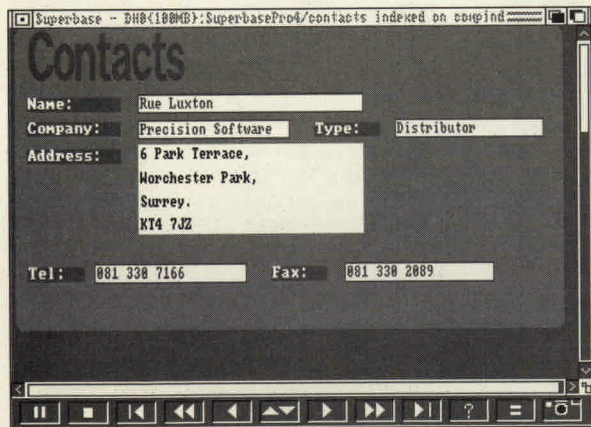
Once a file is created, fields can be allocated index status. An index allows records in a file to be sorted into alphabetical order on a particular field. There is no limit to the amount of indexed fields in a file, but only one index can be selected at any time. This limitation can be solved with the use of composite indices which allow sorting of up to several fields. There is no doubt this is a very powerful sorting function.

ase onal

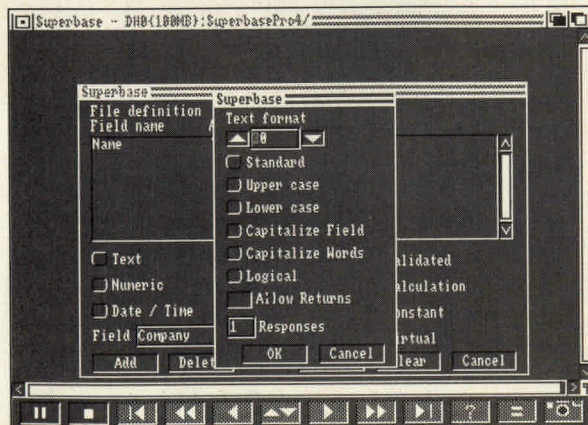
"The Query requester is used in almost all of Superbase's output definitions and allows the user to define criteria which auto-select records for output to screen, printer, or disk file"



Label formats can be produced by pointing and clicking in this intuitive design screen.



The forms designer allows designer screens of up to 16 colours in either hires or lores. This one is not spectacular, but was created in only a few minutes.



The difficulty is not in the file creation, but in the design and thought put into the database!

Views

There are three basic ways to view data, any of which can be selected from the menu, and in each occasion the data is presented in an order depicted by the current index. RECORD VIEW will display one record on screen at a time, with each field occupying one line, whereas PAGE VIEW, although similar, allows the fields to be manually positioned anywhere within the screen while displaying one record. TABLE VIEW displays all fields within a record across one line of the screen in tabulated format, with many records occupying the screen. The limitation of the table view is that the system only remembers the position of the current record, although many records may be displayed, and because of this, the screen can become cluttered as records are overwritten by new data, in what seems to be a chaotic manner, while browsing through files.

Browsing

Browsing through records is accomplished using the control buttons which resemble those of a video recorder, with forward, backwards, fast forward, fast backwards, pause, stop, and several requester buttons. The Query requester, one such button, is used in almost all of Superbase's output definitions and allows the user to define criteria which auto-select records for output to screen,

printer, or disk file. The Query requester allows you to specify from simple to fairly complex conditions that must be met before a record is selected. Queries may be stored, and reloaded, for future use and are the backbone for selective viewing and updating functions.

Many database functions require the employment of selective fields within a record. This menu function allows selected fields to be printed onto labels, imported data to occupy particular fields, exported data to output selected data, and can limit data which is displayed on screen.

Taking the selection and querying a stage further, REPORTS can be generated from the data contained in the fields. At first glance it may be thought that the REPORT is solely a number crunching utility as the examples highlight the addition and presentation of numeric balances. Nothing could be further from the truth as reports can be generated to display textual information on screen, disk, or as printed output. The only problem with REPORTS is that they are far from easy to configure, but once a script has been prepared it can be saved and reloaded.

Text Editor

The text editor supplied with SBPro is not as comprehensive as, say, TurboText or CygnusEd, but it does allow small text files to be created quickly and also features

TEST DRIVE

Superbase Professional 4

Search & Replace, and other editing functions. External text files can be created from the text editor and saved with their filename defined as a Superbase field.

These functions also allow for Mail Merge documents to be created, and then, printed using Superbase's excellent function. Superbase can either use its own printer drivers, each of which may be edited, or use a Workbench Preferences' printer driver, which, in reality, is more convenient.

Labels

Providing the printer is not laser driven, labels can be printed using the relevant menu command. This command will allow loading, saving from the menu and editing via a graphic representation of the label. The fields can be placed any-

C O N T I N U E D

Superbase

Passwords

Delete:

Read and Write

Read only:

OK

Superbase

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Precision Software	Distributor

Superbase - [DBF18607.SuperbaseProd.products.mpr] on 71

Title: Videoscape 3D **Release:** 1 Mar 1991

Company: Precision Software **Type:** Productivity

Price: £ 139.00 **Rating:** 5 **Category:** Desk Top Video

See the review in a future edition of AUI

If you can read this you have good eyesight

The picture on my left is a 16 colour, scaled image, rendered from a 32-colour full size, hires, IFF. The full image in all its glory can be viewed from a menu command, which will display the full screen iff

The picture, and this text, are both external files and are addressed as filenames!

OK **Cancel**

Vision - The strength of new databases is in the display of external graphic and text files, both displayed on the lower portion of this form.

where within the graphic with a limitation of four fields per line and seven lines per label. A oversight to this is that to print a label you must go through the edit function, even though a predefined label may already been loaded.

Form Designer

As can be seen from the illustrations, the use of forms greatly enhance the presentation of the system, a feature which is important if you are setting up the database for others to use.

Several forms may be created for a single file; one for text input, one for reading information, and another giving restricted access to fields. The form can be designed to display selective fields only. Some designers may consider this as security, as they can omit sensitive data by not including the field in a form. However, closing the form will not close the actual file and all data will be available for users to browse through. This is a security lapse in the forms design - closing a form should automatically close

"With the DML, applications can be customised to suit individual files, and even whole working environments can be created"

When creating a NEW file a password requester allows you to enter valid passwords. These may be changed later from a menu/DML command IF Superbase is running in WRITE privilege mode.

down the file too! Imagine an input clerk being able to view sensitive details such as wages, disciplinary records etc..

A form can accommodate several files, and introduces the real power behind linked files. Linked files are those which have been linked to another by a common field, holding the same data. However, without forms there is no joint-display of the two linked records within separate files. This is where security can be designed, as sensitive information could be stored in a separate file which links only to forms which have DELETE-level security.

External graphics also take on a new dimension with forms. Without the use of a form, graphic files are viewed external to the main view, and are full-screen, full-colour, displays which must be paged separately. These graphics can be designed into a box within the form and scaled to fit, but there is a limitation of 16 colours - the maximum allowed on a Superbase form. The rendering of the full-size screen to a reduced "form" image is calculated in real-time, so there is a short delay unless the image is pre-rendered in a suitable package such as ADPro, or DPaint.

Programming

The Database Management Language (DML) puts the icing on the cake as far as Superbase is concerned. The language is derived from BASIC, but includes extra commands and functions that are specific to database management. With the DML, applications can be customised to suit individual files, and even whole working environments can be created. At

the highest level of control, menus can be redefined and programmed to cater for the needs of specialist requirements. Add to this the ability to re-define the function keys, with combinational keying with the ALT and CTRL keys, and databases can be developed to perform specialised operations at the press of a key, or the selection of a menu function. Application languages such as DML and ARexx are confirming the thesis that BASIC programming is not a waste of time. Certainly not with specialised derivatives of the popular beginners language being adopted in so many applications.

Conclusion

As a user's database, Superbase Professional 4 offers the power and flexibility to outperform and outclass its opposition, and at its hefty price level it has no serious competition. However, as a professional system it lacks some of the security as found in comparable PC products.

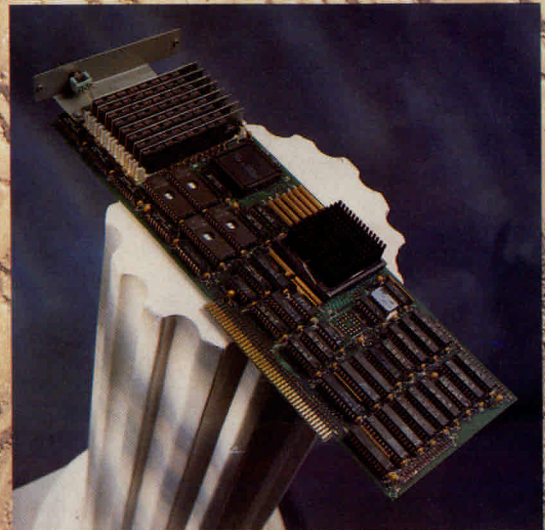
As far as facilities go, every time I thought it couldn't be done a function would be found which surpassed my initial expectations. This was even without resorting to programming and so I must give high praise to an expensive but thoroughly competent database.

Price: £410.00
Contact: Precision Software,
6 Park Terrace, Worchester Park,
Surrey. KT4 7JZ
Tel: 081 330 7166
Fax: 081 330 2089

Shrinks hours into minutes

68040

accelerator board



features

50MHz clock speed

Expandable up to 32MB of memory

18-25 MIPS

68882 Maths Co-processor

Compatible with Workbench 1.3

Up to ten times the performance of the A3000

Installation software disk

Easy to install

Hardware select switch to enable or disable
68040 mode and run original processor

£1999 inc. VAT

Comes with 4MB

Amiga 2000 only



The Way it is in . . . The Newsfile

Page 50

**Amiga TEX in U.K.
Action Cleans Up**

Page 51

**Prowrite Plus Postscript
Prowrite/Quickwrite Dictionaries
ASDG's JPEG Image Compression
Evesham Micros Mighty Ballon
Flight**

Page 53

**Silverbird's Keyboard overlay
Cumana's Six
Star's LC-20
Logic 3 Prices Fall**

Page 54

**Sunrise on Audition 4
Golden Image's Mark II Scanner
Accodata's Media Storage
Mackonochie joins Commodore**

Page 55

**New GCSE Amiga Maths
Amiga Awards
Bigger Bytes and more Pieces
Jet Joystick**

Page 56

**Enhanced Holograms
Two Pounder from Toshiba
This Techno World**

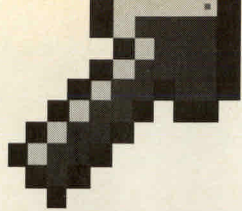
Page 61

**Respectable Pirates
Dataflyer Ram
Sybil**

Page 62

**New Flow
Micromasure V3.
The Musical Graphics Player
Amiga Koln '91**

**Newsfile compiled and
edited by Anthony Mael
and Martin Witton.**



NEWSFILE

AMIGA TEX IN U.K.

Industrial Might & Logic (Now there's a powerful name for you!) have been appointed exclusively UK and Eire distributors of Amiga TEX, the professional typesetting system for the Amiga.

IML will be supplying the recent 3.1a release. Among the many new features are full PostScript font and graphics support on the screen and to any supported printer, and AmigaDos 2.0 compatibility.

IML are launching the product at a price which, they told **AUI**, is actually cheaper than the cost of importing directly. IML are also offering a free, functional demonstration disk to any Amiga user who writes (not phones) and asks for it.

AmigaTEX has a long history of firsts for the Amiga. Available since mid-1986, AmigaTEX was the first to use scalable font technology to provide the best possible output on any printer. AmigaTEX was the first typesetting program to allow interprocess communication with other applications through ARexx. And now, IML told **AUI**, AmigaTEX is the first publishing program on

the Amiga to support fully arbitrary PostScript fonts and graphics on-screen.

AmigaTEX users can now choose from thousands of PostScript Type 3 and hinted Type 1 fonts from numerous sources. The fonts will be automatically rendered for screen display or for any printer as needed.

PostScript graphics from a wide variety of sources - including virtually all structured drawing packages on the Amiga and other machines - can be easily scaled and integrated into AmigaTEX documents. The graphics will appear on the screen exactly as they will on a printer, within the limits of the screen resolution. And, as with fonts, any printer can be used.

Widely recognised as the best TEX implementation available for any computer, AmigaTEX is fully compatible with the latest TEX 3.1 and METAFONT 2.7 standards, and fully supports virtual fonts in the previewer and all device drivers.

Contact: Industrial Might & Logic Ltd., 58, Cobden Road, Brighton, BN2 2TJ. Tel: (0273) 621393.

ACTION CLEANS UP

Action Computer Supplies now offers a new range of cleaning kits from Automation Facilities, specialist manufacturers of cleaning products for computers and electronic equipment.

Three of the new kits are all based on AF's Foamclene aerosol cleaner. These include a Printer and Typewriter Kit, a Screen Case and Keyboard Kit, and a Multi-purpose Cleaning Kit.

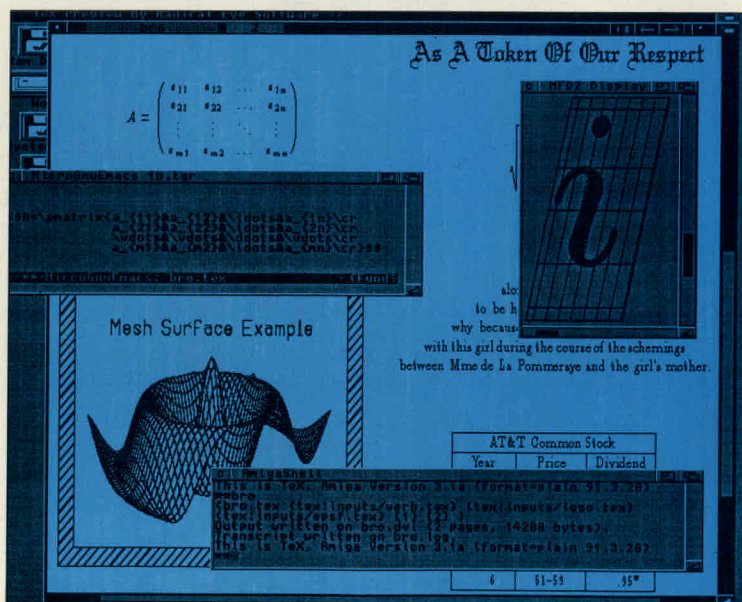
Prices from Action range from £8.60 for the Screen, Case and Keyboard Kit, to £26.50 for the Printer and Typewriter Kit. When included in an order totalling over £100 - made up of any mix of products from the Action catalogue - these prices are reduced to £7.20 and £22.40.

Contact: Action Computer Supplies, Alperton House, Bridge-water Road, Wembley, Middlesex, HA0 1EH.

Tel: 0800 333 333.



CLEANLINESS IS NEXT TO AMIGA-NESS...



AMIGA TEX PROFESSIONAL TYPESETTING QUALITY FROM THE AMIGA

NEWSPOINT HUMAN FAILURE AND COMPUTER ERROR?

An enquiry into the first train crash on London's Docklands Light Railway has revealed it was caused by a combination of computer failure and human error.

Yes, computers are just not programming humans properly these days. Surely what the humans need is properly backing up.

PROWRITE PLUS POSTSCRIPT

New Horizons have announced an upgrade to ProWrite, their multi-font, colour, graphics world (sic) processor. ProWrite 3.2 will now have Postscript capable output incorporated directly into the program.

"PostScript printer owners are increasing at a fast rate within the Amiga community. We have supported postScript output in the past with a separate module, and now feel the time is right to offer direct PostScript capabilities within the ProWrite program itself. This enhanced version of ProWrite will satisfy our installed base of users as well as help bring the program to a new group of users," said James Bayless, President of New Horizons. "ProWrite is currently the best selling word processor on the Amiga and we will continue to enhance the program in order to maintain its competitive edge", he said.

In addition to PostScript support, ProWrite now has the ability to import and export Professional Page text files. Additionally, there have been significant enhancements made to the user interface. ProWrite RRP \$175.00.

Contact: New Horizons Software, Inc. P.O. Box 43167. Austin TX78745. Tel: (512) 328-6650.

PROWRITE/ QUICKWRITE DICTIONARIES

Complete German and French spelling dictionaries for ProWrite are now available. These are large dictionaries with over 85,000 words in each. "Yet with all their size, the spell checker" New Horizons told *AUI*, "still zips through your documents with speed."

Price \$35.00 each.

So if you're writing in German or French, contact: New Horizons Software, Inc. Attn. Dictionaries, PO Box 43167 Austin Texas 78745.

ASDG's JPEG IMAGE COMPRESSION

ASDG has told *AUI* that it is the first company to bring JPEG compression technology to the Amiga. The ability to save and load JPEG (Joint Photographic Expert Group) files will become a standard part of ASDG's Art Department Professional in its next release.

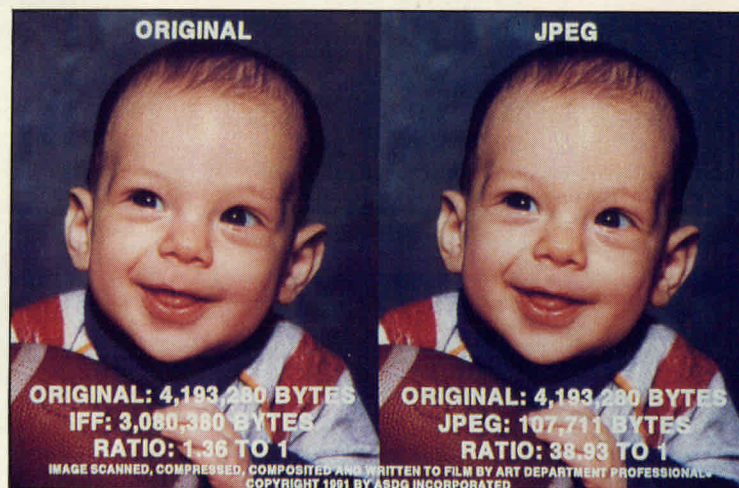
Using JPEG compression techniques, a true colour or grey scale image can be compressed to a fraction of its original size without significant degradation. The JPEG algorithms achieve extraordinary compression results, potentially 80 to 1 or better. also, ASDG's imple-

mentation meets the JFIF standard allowing JPEG files created on IBM, Apple or other computers to be exchanged with those created by Art Department Professional.

ASDG's JPEG saver allows the user to specify how much compression should take place. ASDG's JPEG loader can enhance heavily compressed images by applying image processing techniques during decompression. On an A3000, an overscanned (768 by 480) 24 bit plane image, which uncompressed consumes 1,105,920 bytes of memory, can be reduced to less than 30K in approximately 35 seconds.

The availability of JPEG support is an important step forward, say ASDG, as the Amiga is so heavily used in video, print, and other imaging related fields.

Contact: ASDG, Incorporated, 925 Stewart street, Madison, Wisconsin, 53713. Tel: 608/273-6585.



FIRST TIME FOR JPEG ON THE AMIGA

EVESHAM MICROS MIGHTY BALLON MARATHON

It will be "Up up on the day" for Evesham Micros on November 22nd when they hope to release nearly 10,000 balloons and raise

the same amount in cash for the BBC Children in Need appeal.

The Evesham Micros Mighty Balloon Marathon will offer its customers the chance to win an Amiga 500 computer with colour monitor (or the equivalent value in goods) plus the lucky person returning the winning ticket receives an Atari Lynx hand-held games console (and who wants that?). Staff at Evesham Micros, 'while trying to keep their feet firmly on the ground', (We didn't say that!) are asking customers to donate a pound. This will go directly to the appeal but also buys a balloon ticket which will take to the skies along with thousands of others on the big day.

Contact: Evesham Micros, Unit 9, St. Richards Rd. Evesham, Worcs. WR11 6XJ. Tel: (0386) 765500.



NEWSPPOINT

Freephone: HACKER

The best a hacker could hope for in the past was the thrill of knowing he had wreaked havoc to a computer system and cause thousands of pounds worth of damage, but now enterprising hackers can get free phone calls too. For computers controlling cellular phones are also open to abuse.

Hackers have developed chips to modify cellular phones so the cellular networks are fooled into allowing free calls. Police say almost all drug dealers they catch have these modified cellular phones. The suppliers have developed several software patches to block some of the calls but they are unable to make the system watertight.

MJC COMPUTER SUPPLIES

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TO ORDER: Please call the telephone number listed below to place credit card orders (Access/Visa) or send cheques/POs made out to MJC Supplies to:

MJC SUPPLIES (AUI)
Unit 2 The Arches, Icknield Way,
Letchworth, Herts. SG6 1UJ.
Tel: (0462) 481166 (6 lines)

PROTAR PRODUCTS

Protar are a well known German company who have now opened in the UK. They produce a range of quality products for the Amiga at very reasonable prices. All products are backed by an impressive 1 year REPLACEMENT warranty direct from the manufacturers. NOTE: Protar products due September.

PROTAR A500 HARD DRIVES

A range of drives from 20Mb to 200Mb all with an impressive list of features:

- Optional Ram expansion up to 8Mb
- Transfer rate greater than 1Mb/second
- Up to FIVE times faster than A590
- Drive disable switch
- External SCSI interface

PROTAR A500 HD 20Mb version £279.00

PROTAR A500 HD 30Mb version £349.00

PROTAR A500 HD 50Mb version £429.00

FREE Courier delivery on Protar Hard Drives

PROTAR C141M MONITOR

Based on the Philips CM8833 the C141M comes with a variety of inputs and complete with leads.

MJC PRICE £248.00

FREE Courier delivery on Protar Monitors

PROTAR 1/2 Meg Memory Expansions

1/2 Meg internal (trapdoor) expansion, latest 4 chip design with battery backed clock.

MJC PRICE £27.95

SUPRA 500RX EXPANSIONS

New memory expansions for the A500 - plugs directly into the HD expansion port - NO INTERNAL CONNECTOR REQUIRED

SUPRA 500 RX EXPANSION 1Mb £119.95

SUPRA 500 RX EXPANSION 2Mb £189.95

GOLDEN IMAGE OPTICAL MOUSE

A true optical mouse - no more balls! includes special optical mouse pad

MJC PRICE £34.95

NAKSHA UPGRADE MOUSE

280 DPI with FREE Mouse House + Mat now also includes free Op Stealth game

MJC PRICE £21.95

SQuik - Replacement Mouse

Same spec and design as Naksha mouse

MJC PRICE £14.95

CUMANA CAX 354 DISK DRIVE

Quality Brand name 3.5" second drive includes thru port, disable switch and No Hassle 1 year guarantee. INCLUDES FREE VIRUS-X UTILITY

MJC PRICE £59.95

A1500/2000 PERIPHERALS

SUPRAM - add on Ram cards with space for up to 8Meg of extra Ram.

SUPRAM with OK fitted £84.95

SUPRAM with 2Mb fitted £159.95

SUPRAM with 4Mb fitted £225.00

SUPRAM with 8Mb fitted £349.95

SUPRA HARD DRIVES

Using the fast Wordsync 2000 controller and quality Quantum drive mechanisms.

(A1500/2000)

SUPRADRIVE 52Mb (11ms) £389.95

SUPRADRIVE 105Mb (11ms) £529.95

GVP SERIES II HARD DRIVES

Quality drives with the ability to add up to 8 Meg of extra Ram on board.

(A1500/2000)

52 Meg (11ms) version **£419.95**

105 Meg (11ms) version **£539.95**

GVP Series 2 controller board **£199.00**

SIMMS Modules - **£79.95** per 2 Meg

MICROWAY FLICKER FIXER

Eliminate interlace flicker from your A1500/2000 - requires Multisync or a 31MHz scan monitor. (not PAL overscan)

MJC PRICE £139.95

PANASONIC C1381 MULTISYNC MONITOR

At last a quality multisync monitor at an affordable price. Works in ALL Amiga modes ideal for use with the Microway Flicker Fixer. A quality product backed by TWO YEAR on-site maintenance.

MJC PRICE - CALL

GOLDEN IMAGE HAND SCANNER

Quality 400 dpi scanner with powerful Touch Up enhancement software.

MJC PRICE £139.95

LIMITED STOCKS!

WORDPROCESSORS

Kind Words 2 £29.95

WordWorth £84.95

PROTEXT Version 5

A very fast command based package now with 110 000 word Collins Dictionary, Mail Merge and up to 36 files open plus much more - call for details. (1 Meg)

MJC PRICE £99.95

PROTEXT V4.3 £64.95

PRODATA AMIGA £55.95

AMIGA EDUCATIONAL

Fun School 2

Fun School 2 under 612.95
Fun School 2 6 to 812.95
Fun School 2 over 812.95

Fun School 3

Fun School 3 under 515.95
Fun School 3 5 to 715.95
Fun School 3 over 715.95

LCL Software

Primary Maths Course19.95
Micro Maths GCSE19.95
Micro English GCSE19.95
Micro French GCSE19.95

Kosmos Software

Junior Quiz 6 to 1114.95
Senior Quiz 14+14.95
French Mistress14.95
German Master14.95

Learn to Read With Prof - by Prisma, is designed to teach a sight vocabulary of 63 words and is aimed at 4+ years. The pack includes 5 small reading books and a cassette.

MJC PRICE £19.95

DESKTOP PUBLISHING

Pagesetter 2 - (Free Clip Art) 47.95

Pagestream V2.1 139.95

Pro Page V2.0 169.95

The above programs all require at least 1 Meg and 2 drives/Hard recommended.

VIDEO TITLING/PRESENTATION

Big Alternative Scroller 42.95

TV Show - IFF slide show 54.95

TV Text Pro - quality fonts 79.95

Broadcast Titler II 169.95

Broadcast Font Pack (10 Fonts) 84.95

Broadcast Font Enhancer Pack 84.95

ZVP VIDEO STUDIO

Great Video Production package - call for details (requires 1 Meg + 2 drives)

MJC PRICE £89.95

RENDALE 8802 GENLOCK

Great value Genlock offering both Foreground and Background modes.

MJC PRICE £159.95

8802 MODE SWITCH BOX - £29.95

GRAPHICS

Pixmate 34.95

Digi Paint 3 44.95

3D Construction Kit 37.95

Digiview 4 Gold 89.95

Deluxe Paint 3 57.95

Disney Animation Studio 74.95

DELUXE PAINT 3 VIDEO TUTORIAL

Nearly 3 hours of 'how to' with DPaint 3

MJC PRICE £17.95

AMOS - The Creator

AMOS V1.2 - The Language £33.95

AMOS COMPILER - now available £21.95

AMOS 3D - now available £24.95

SOUND/MUSIC

MasterSound Amiga £29.95

Techno Sound Turbo (Stereo) £29.95

Harmoni - Sequencer £29.95

Alter Audio - Midi Starter Pack £79.95

THE MIDI CONNECTOR

Featuring Midi In, 2 x Midi Out, Midi Thru and Serial port Thru + 2 cables.

MJC PRICE JUST £14.95

MISCELLANEOUS

INFOFILE 29.95

MAXIPLAN PLUS 39.95

SUPERBASE 49.95

SUPERPLAN 49.95

PERSONAL FINANCE MANAGER 22.95

VIDI AMIGA

VIDI COLOUR SOLUTION

Vidi Colour package - including Vidi Digitiser, Vidichrome and Photon Paint

MJC PRICE £95.00

RGB SPLITTER - for use with Vidichrome or Digiview. (includes PSU)

MJC PRICE £59.95

COMPLETE COLOUR SOLUTION

Package includes Vidi Amiga, Vidichrome and the RGB Splitter for a complete colour digitising outfit. NOTE: For best colour pictures you require a video camera or perfect still frame VCR

MJC PRICE £139.95



Remember - prices include VAT & delivery!



SILVERBIRD'S KEYBOARD OVERLAY

Compatible with all Amigas except the A1000, Silverbird Computing have launched a blank overlay that fits over and around the keyboard, enabling commands and keyboard shortcuts to be written directly on the overlay where they can be seen quickly, so avoiding the need to search repeatedly through software instructions to find which the right key is.

Mel Noonan, founder of Silverbird, is not only a self-confessed Amigaholic, but claims to be a flight "simaholic" too. ("Simaholic! Now there's a yuckie word for you!")

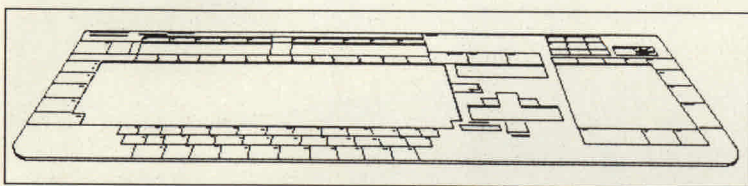
Six months ago he found he was getting not a little confused by the way that various software companies use different keystrokes to do similar things, e.g. landing gear can be operated by

use of the L, G, or W keys depending on the program, and if you are not careful you could reach out to activate your E.C.M. and embarrassingly find yourself suddenly ejecting instead. Having written off several million pounds worth of aircraft, Noonan decided to act, and so the Silverbird overlay came into being.

Silverbird say it is suitable not only for flight simulations but for virtually all Amiga software that uses keyboard commands and equivalents - and that means games, music, art, business, D.T.P...

Silverbird overlays are sold in packs of five for £6.20.

Contact: Silverbird Computing, 47 Barton Road, Harlington, Beds, LU5 6LG.



Don't write off your unsilverbirded plane

CUMANA'S SIX

A multiple CD-Rom system comprising six CD-Rom optical drives has been released by Cumana. Each CD-Rom drive includes a CD audio capability and an Mtb of 25000 power-on hours. Conforming to the Sony and Philips CD-Rom standard Mode 1, Mode 2, the CDS-436 has a data readout from disk speed of 150Kbytes, a revolutionary speed of approximately 200-500rpm and an optical pickup system comprising a semiconductor laser and a linear-motor head-movement mechanism.

The front loading CDS-436 comes with individual CD cartridges MS-Dos extensions software and Scsi controller. It measures 340 x 280 x 190mm and weighs about 16kg.

STAR'S LC-20

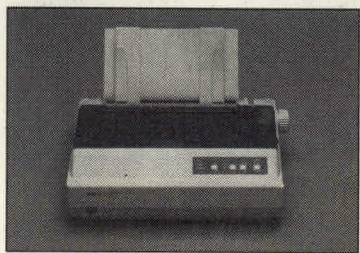
Star Micronics U.K. has announced the LC-20, its new 9-pin entry level Business Series dot-matrix printer. The LC-20 is the successor to the award winning LC-10 (2.25 million of which have been sold worldwide) and is in the U.K. priced at £199, excluding VAT.

The LC-20 is aimed at small businesses, home users, education and even departments within major companies. It features eight NLQ fonts including italics, with print speeds of 180 cps in Draft Elite and 45cps in NLQ at 12 cpi.

Other features include a 4 Kb print buffer, a push tractor feed with short form tear-off, paper parking, a built-in parallel Centronics inter-

face plus both Epson and IBM emulations. An optional serial interface is also available.

Contact: Star Micronics U.K. Ltd., Star House Peregrine Business Park, Gomm Road, High Wycombe, Bucks. HP13 7DL. Tel: 0494 471111.



THE NEW STAR BABY

LOGIC 3 PRICES FALL

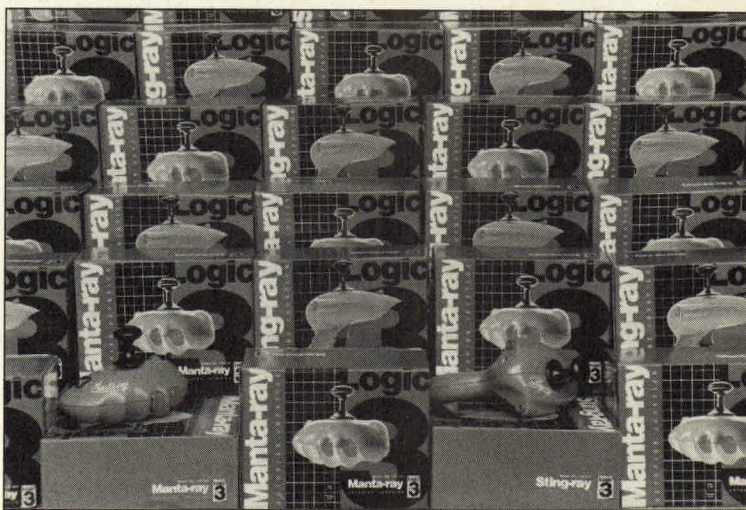
The two current Logic 3 joysticks are falling in price. The Sting-ray and the Manta-ray are to come down from £15.99 to £13.99.

The Sting-ray and Manta-ray, both of which were launched this year, are hand held joysticks. The Sting-ray, claim Spectravideo, has "sleek good looks and is the joystick answer to a blond bombshell - although it is blue". (We would rather hold a blonde bombshell in our hand even if she isn't blue!)

Spectravideo boss Ashvin Patel told **AUI** "Launching a new joy-

stick is a very expensive business. The initial design and the tooling, between them, cost a small fortune. We estimate how many joysticks we think we shall sell over the first year or so and then price them so that we will cover the development costs over this period. Admittedly, with a recession on, our sales estimates were cautious, but sales have in fact greatly exceeded our expectations. That is why we have been able to lower our prices."

Or, of course it might just be to sell more of them....



FEELS LIKE A BLONDE BOMBSHELL IN YOUR HAND...

"Quote of the month"

From Ederhand Witte, Chairamn of Technology Think Tant, Munichen Kries!

"In the very near future, every normal household in Germany and in many other European Countries will have a fax.

Another development concerns computers. people are now communicating with there computers. That is a very development."

NEWSFILE

SUNRIZE ON AUDITION 4

SunRize Industries has begun selling Audition 4, its digital sound editor for the Amiga. SunRize is best known for Perfect Sound, which they claim is the USA's best selling Amiga 8 bit sound sampler. Audition 4 has recommended price of \$99.95 in the USA, DM 149 in Germany, and £49.99 in the UK.

Audition 4, SunRize told *AUI*, makes full use of Intuition. Digitised sounds are represented graphically. Using the mouse, you can zoom in and select portions of the sound for editing. SunRize say it is easy to cut, copy and paste as well as echo, flange or filter the selected sound. Written in 100% Assembly language for speed and memory efficiency, SunRize say, you spend less time waiting and worrying about "Out of Memory" errors. Because of Audition 4's sequenced loop capability the

creation of long scores that uses much less memory than normally required. Audition 4 has what SunRize claim is a unique preview mode allowing you to try edits and effects before you select them.

Audition 4 includes the standard complement of cut, copy and paste functions. But you also get extras among which are: Real time zoom, fast scroll, freehand edit, zero search, echoes, high pass filter, low pass filter, band pass filter, stop band filter, mix, fade, flange, vu meter. It saves and loads sounds in the industry standard IFF 8SVX format as well as the Sonix instrument format. This ensures compatibility with many Amiga software packages. Applications that work with Audition 4 include: Amiga Vision, Bars & Pipes, CanDo, Sonix, Perfect Sound, TigerCub and many others.

GOLDEN IMAGE'S MARK II SCANNER

The Golden Image Mark II Hand scanner comes with Migraph's software which Golden Image told *AUI* is improved and upgraded. The Amiga scanner now comes with Touch-Up Version 1.1.

Touch-Up is Migraph's product for scanning and editing high resolution images on Amiga. Since its introduction in early 1990, Migraph has released several versions of Touch-Up. Version 1.1 for Amiga is the latest.

With touch-Up Version 1.1 for Amiga, a sketch tool in Paint mode and the new Scanning Utility have been added. The scanner can now be used in program, or to increase the available scan length for low memory systems.

For quick scan and saves which do not need the editing power of Touch-Up, the Scanning Utility provides access to Zoom Full Feature and all the same Save Full Functionality as regular Touch-Up.

After scanning a colour or grey scale picture using the dithered mode setting on your scanner, you can now save out a Greyscale im-

age. This upgrade is especially designed to take the dithered patterns from the scanner and turn them into logical shades of grey. Greyscale images offer a real advantage over halftones because they can be sized without distortion.

Currently you must calculate the size/resolution of the image versus the resolution of the printing device in order to get an image without distortion or avoid the moire (plaid looking) pattern in the image.

With a greyscale image you can size the image in the DTP program to the exact dimensions you require. Then, when the image information reaches the printer, the printer turns it back into a halftone, and a distortion free image.

For present owners of Golden Image Hand Scanners purchased from Golden Image (U.K.) Ltd., or from Golden Image approved dealers, software can be upgraded at a cost of £15.00.

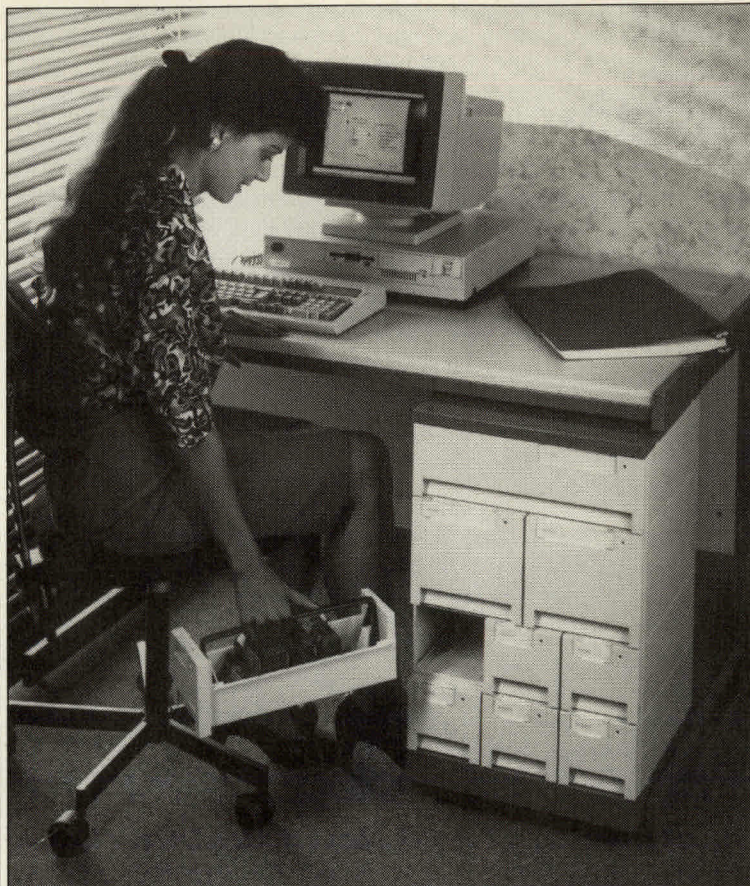
Contact: Golden Image U.K. Ltd., Golden Image House, Fairways Business Park, Lammas Road, London E10 7QT. Tel: (081) 518 7373.

ACCODATA'S MEDIA STORAGE

The Accodata Disc file is an ingenious new high capacity media storage system that is designed to grow with the user's needs. Stackable, the modular system comprises 5 1/4" and 3 1/2" disk boxes that slot together and can be built up in blocks to the size the user requires.

Disc File takes a different media, including floppy disks, data cartridges, micro-fiche, audio tapes and CD's. A carry-handle built into each, enables the user to transport individual Disc Files.

Contact: Accodata, Nepicar House, London Road, Wrotham Heath, Kent, TN15 7RS. Tel: 0732 885555.



WHERE DEBORAH THE ACCODATA GIRL KEEPS HER SECRET SUPPLIES OF DISKS AND OTHER PERSONAL REQUISITES.

MACKONOCHE JOINS COMMODORE

Multimedia pioneer Jim Mackonochie has joined Commodore UK as General Manager CDTV Development Europe.

Commodore say Mackonochie's main role will be to aid CDTV publishers and developers in European markets. He will foster development in education, leisure and business applications equally and pass on news of developments happening in the US and Japan.

Mackonochie has been working for Commodore as a multimedia consultant since March 1990, and was one of the key players on the CDTV project team. Prior to his work with Commodore he worked

for Mirror Group Newspapers and Maxwell Communications and was founder and chairman of both Mirrorsoft Ltd. the software entertainment publisher, and Pergamon Compact Solution, a publisher and developer of CD-ROM and multimedia titles. Mackonochie told *AUI*: "I've long believed that CD technology was going to have a profound impact. It is clear that - with CDTV - this is now a reality".

Yes, Jim, and Amiga users are waiting eagerly for that A690 CD drive that will give us all access to the wonders of CDTV. But will it come for the originally announced £299 or, as is rumoured, be closer to a hundred smackers more?

NEW GCSE AMIGA MATHS

LCL are to release a new and rewritten version of Micro Maths.

This version includes the latest topics from GCSE and has, LCL told *AUI* "new stunning graphics and sound". It has many large, three dimensional, colourful pictures and multi-channel help to motivate the student and ensure continuance of the course. The new version also includes a three-dimensional calculator whose buttons can be "pressed" by moving the mouse. This can be used at any time to help calculate the answers.

Micro Maths is an already established course taking ages 11 up to GCSE in 24 programs, or equivalent. It includes over a million different possible problems and comes with a book and a manual.

The new Micro Maths course includes the following topics: percentages and Fractions, Averages and histograms, Ratio and proportions, simple algebraic equations, simplification in algebra, simple and compound interest.

The many Amiga users who have already bought Micro Maths can purchase the new programs for a handling charge of £5. They need to send some proof of purchase direct to LCL.

The new Micro Maths costs £24 (+ 99p postage) and is available from major chain stores, computer shops or direct from LCL.

Contact: LCL, Thames House, 73, Blandy Road, Henley-on-Thames, Oxon RG 9 1QB.
Tel: 0491 579345.

BIGGER BYTES AND MORE PIECES

Lancashire-based Chris Wright of Bytes and Pieces has excitedly told *AUI* of three new products designed specifically for the 2000/1500 Amiga range the 040 Magnum from CSA comes with three interfaces on board to link directly into the 040 bus. The first is a super-fast SCSI interface with read speeds of 3.5 meg a second; also a serial port and a parallel port. These last two again are linked direct into the 040 bus for "blazing fast" (Chris gets more excited as he goes along!) digitising among other things.

The board will come with 5 meg standard expandable up to 64 meg. (64 Meg not Ki!). One meg of the initial memory is SRAM to install Kickstart 2.0 into 32 bit memory and still leave room for any customisation. The unit has been designed with the Video Toaster in mind and the speed will make waiting for ray tracing "a thing of the past". The original 68030 card from CSA was claimed to have improved the Amiga speed by a factor of 8.5. "The new 040 will improve on that much further and you will see your Amiga running at over 40 times faster than in native mode". (By this time, Chris is in overdrive himself!) Prices start at £2,499 for the unit with 5 meg installed.

SOUND ENHANCER.

You are in for a shock, claims Chris, as Omega Projects have brought out an enhancer with clever filtering to boost the quality of the bass

and higher notes "out of all proportion". Bass is much more punchier (and Guinness is pure genius!) and higher frequencies are greatly enhanced. It works with all Sound Samplers, music packages "In fact anything when placed between your Amiga and Monitor or Hi Fi" (Even your girlfriend?) Available solely through Omega Projects on 0925 763946 or Bytes and Pieces for £35.

AMIGA GRAPHICS WORKSTATION

Bytes and Pieces believe that some users of Amigas will find the price of a 3000 a little beyond their reach. (Not you, of course) So Chris claims that their slogan 'More Power For Less Money' will ring very true when they launch a Graphic Workstation for £1999. So how do you get more power for less money? The heart of the unit is a Revision 6A motherboard in a square metal case sporting a separate keyboard. Inside this shell is a CSA 68030 accelerator running at 25 or 33 mhz with a co-processor available up to 50 mhz. 2 meg of 32 bit ram (expandable to 8 meg) is standard as is 512k of SRAM for placing the Amiga operating system into 32 bit ram. A flicker fixer, a 52 meg Quantum hard drive (larger sizes available) and 2 meg of chip ram. "Another first from Bytes and Pieces" says Chris proudly.

Contact: Bytes and Pieces, 37 Cecil Street, Lytham, Lancs. FY8 5NN. Tel: 0253 795376.

Amiga Awards

Amiga software and peripheral developers recently selected top products released in 1990 in six categories. The developer community also selected one product to be included into the "Amiga Hall of Fame." The following award were presented at an awards luncheon at the annual North American Amiga Developers Conference in Denver:

Best Education Software:
Best Entertainment Software:
Best Consumer Productivity Software:
Best Professional Productivity Software:
Best User Interface:
Best Hardware:
Amiga Hall of Fame:

Distant Suns by Virtual Reality Laboratories
Lemmings by Psygnosis
AmigaVision by Commodore
AmigaDOS C Development by SAS Institute
Workbench 2.0 by Commodore
Video Toaster by NewTek
Fish Disks by Fred Fish

In addition, two awards were presented in recognition of valuable contribution to CDTV. They went to ASDG, Inc. for their Art Department Professional and the Right Answer Group for the Director II.

European Amiga developers also had the opportunity to select their favourites. The winners were recognized on Thursday, September 10 at an awards dinner at the 1991 European Amiga Developers Conference held in Milan, Italy.

European Winners are:

Best Education Software:
Best Entertainment Software:
Best Consumer Productivity Software:
Best Professional Productivity Software:
Best User Interface:
Best Hardware:
Amiga Hall of Fame:

Planetarium by Virtual Reality Laboratories
Lemmings by Psygnosis
A-Max II by ReadySoft, Inc.
AmigaTeX by Radical Eye Software
Workbench 2.0 by Commodore
Amiga 3000T by Commodore
Matt Dillon

CDTV special recognition awards will go to Next Technologies for Disc Building and to Mandarin Software for AMOS The Creator.

JET JOYSTICK

Product 2000 have announced a new range of 'Jet' Joysticks. Comprising 3 models, the MICROJET, SUPERJET AND MEGAJET. All feature micro-switches, and what the manufacturers call "the unique 'Comfort grip'" (Sounds like a brand of nap-

pies, doesn't it?)

Easily identified with their bright red base, the 'Jet' range from Product 2000 "Are the Joysticks for the 90's." (Surely that should be for the 2000's?)

Contact: Product 2000, 142 Church Hill Road, Cheam, Surrey SM3 8NA Tel: 081 644 0033.



THE STICK FOR JET SETTERS?!!

ENHANCED HOLOGRAMS

Centaur Software have signed a licensing agreement with Hologramophone Research Inc. of St. Paul, Minnesota. Under the agreement, Hologramophone has granted Centaur the exclusive, worldwide rights to their music products for the Amiga family of computers.

Hologramophone is known for its inventive software products which are unusual in their scope and concept. Hologramophone's

unique 'Pixound' software, which converts Amiga graphics into music, and 'Hyperchord', the dynamic sequencing program, will both be released in new enhanced versions on the Centaur label. Current users of these products will be able to upgrade to the new versions through Centaur.

Contact: Centaur Software Inc. P.O. Box 4400, Redondo Beach, CA 90278. Tel: (213) 542 2226.

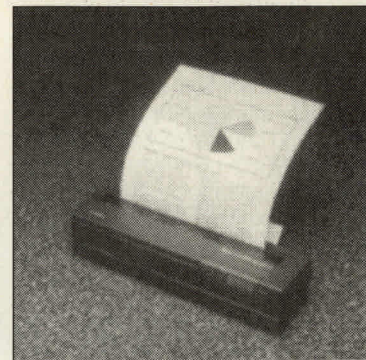
TWO POUNDER FROM TOSHIBA

Toshiba are challenging Citizen's claim to have the smallest printer available. Toshiba have launched the ExpressWriter 210, which, they declare, is really the smallest printer on the market.

The printer weighs in at a mere 2.1lb and measures 11.9 x 3.1 x 1.7in, and is a 24 dot thermal transfer printer which can be battery powered and will print continuously for one hour using a removable battery. It can print on either special thermal paper or, using a ribbon, standard office paper to produce full letter quality output.

The printer has a speed of 53cps at 10cpi and 63cps at 12cpi, and can print graphics at resolution of 180 x 180dpi. The ribbon life is ap-

proximately 35,000 characters. Included as resident are Courier and Prestige Elite fonts. A Centronics parallel port is included. And who says size isn't important?



THE SMALLEST YET?

THIS TECHNO WORLD

MEATY CHIPS?

Forget D-Rams, S-Rams, superconductors, and photo-electric computers. According to a recently published report, scientists at the Immunology Department of the University of Illinois have made 'startling' progress towards creating protein chips.

The University's Professor Stephen Sliger says he is working with different proteins - including haemoglobin proteins - which can absorb light and react to electrical currents.

Protein molecules can be placed in arrays on semiconductor materials and currents passed through the arrays. And, according to Sliger, when the protein engineering is complete the genes can be inserted into bacteria and cloned many millions of times.

But it seems we'll have to wait some time until protein chips begin to eat up the market - the research is still in its preliminary stages.

FLOPTICAL SYSTEMS READ AND WRITE DOWN.

Ambar Systems claims its new VM (variable mode) 'Floptical' disk drive is the first high-capacity 3.5in flexible disk drive to offer downward compatibility with standard 3.5in floppy drives. It also reads and writes standard low capacity double density 3.5in diskettes.

The drive offers 20.0Mbyte of formatted capacity on removable media by merging optical and magnetic recording technologies. The standard 3.5in high-density diskette features optical servo-tracts precisely embedded into the surface to provide a 'dramatic' increase in storage capacity.

The 1325 VM drive includes a double gap read/write head with one gap dedicated to the reading and writing of 'Floptical' diskettes. The second gap is dedicated to reading and writing of ordinary low capacity diskettes.

The drive is designed to plug-and-play with existing SCSI host adaptors for PCs, PS/2s and Macintoshes. What about one for the Amiga?

PHONE YOUR COLOUR PICTURES.

A Surrey-based systems integration house has claimed to have come up with a way of sending colour pictures over a mobile phone network to a laptop PC. The technique, known as the 'Fractal Transform Process', means both still and video pictures can be sent over the network cheaply and using very little memory.

The company, Otib (Origin Technology in Business) is now offering the technique to a wide

range of developers, including Panasonic.

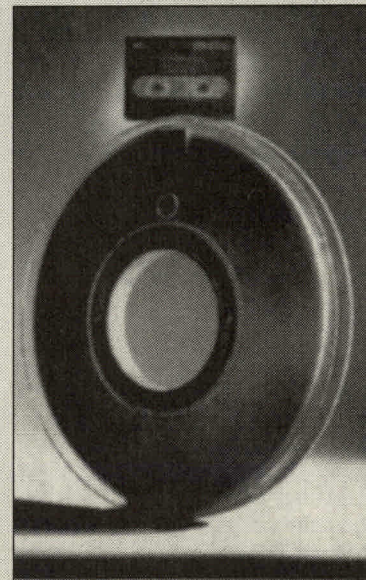
The fractal transform process uses hardware to compress the incoming image before transmission, and low cost software to decompress it at the other end.

Panasonic is looking at the technology, and some organisations related to the police and museums are also interested, according to Otib director, Andy Sinden.

He told **AUI** there is a 'massive number' of potential applications for the technique, including security organisations, insurance and banking.

DATS WITH COMPRESSION.

Hewlett-Packard have announced two 3 1/2in DAT (Digital Audio Tape) drives - the HP 35470A and HP 35480A - with a potential storage capacity of 8 Gbyte per \$10 cost tape. The 35470A incorporates two developments which HP says are previously unseen in DAT products: a 3 1/2in package, making it suitable for inclusion in standard PC boxes; and 8 Gbyte of storage capacity on a single 90m tape. The 35480A tape drive is in the same 3 1/2in package, but is also the first Dds drive, HP believes, to feature hardware data compression, giving up to 8 Gbyte of data per cassette.



8 Gbyte on a Dat.

IBM GROWS VERY THIN.

IBM claims it has developed the industry's first 'thin film' multichip module for PCs and workstations. The prototype holds nine chips and 100 feet of connecting wire in a two-inch square package. Up to now, multichip packages have been found only in mainframes, and the circuit boards in PCs are too far apart to carry signals fast enough to keep pace with chip technology. So, IBM believes, Thin Film multichips are the answer.

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- ★ DIGITISE images in HAM, EHB, 32,16,8, & 4 colour, monochrome, threshold, interlace and overscan modes.
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For your free show disk of pictures contact Carolyn on 0892 518181; and on 0892 75791.

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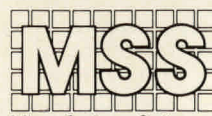
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RESPECTABLE PIRATES

Many of Britain's top firms are still risking prosecution for illegal copying of software, according to a survey carried out by Data Business. The report showed 85% of the U.K's top 100 firms have a policy designed to comply with copyright laws. But 52% admitted not to have implemented practical steps to prevent such copying, and 55% admitted some staff occasionally did copy. However, none of the companies accepted that their staff regularly made or used unauthorised copies. (Well, they would say that, wouldn't they?)

26% said staff were largely unaware of the legal penalties of making and using unauthorised software. (Oh yeah?)

The Federation Against Software Theft has published the findings of its own survey commissioned into the level of software theft currently existing within British industry, which has risen, they say, at quite an alarming rate.

The survey shows that: 55% of senior managers using PCs at work copy software, either knowingly or not (How do you copy something "unknowingly"?); 41% of all senior managers have broken the 1988 Copyright Designs and Patents Act; 43% of the general public who use a PC admit to having illegally used

software (And do you deny that you are among them?); 37% of senior managers admit to having loaded a piece of software onto more than one machine; and 29% of these managers have accepted a copy of a software package from a colleague and installed it on their own machine.

To help combat this problem, Fast has begun a campaign to raise corporate awareness of the problems involved in software. The campaign will involve a nationwide advertising campaign and recruitment drive along with an Approved Auditor certificate scheme whereby dealers and Vars will be able to audit the software a company uses, at the company's request.

According to Fast, companies with a strict software policy are far less likely to be guilty of software theft, and the audit, along with advertising campaign, should help, FAST hopes, make British managers aware of the legal situation regarding software theft. Maybe another step in the right direction would be for the software companies to bring down their prices to such a level that people will not feel the need to copy software. C.A. did it with Supercalc. Why can't the richest of them all, Microsoft, do it too? Cheaper software is the best answer to piracy.

Dataflyer's Ram

Trilogic have brought out a memory expansion card for their Dataflyer SCSI interfaces of the eponymous stand alone card. Its main features are 8 SIMM sockets 256K x 8 or 1Meg x 8; it has from 512K to 8 Megs of Fast Ram in either 1/2 or 1 Meg steps; 4 layer construction; it is fully compatible with the baseboard and when used together can provide up to 10.5 Megs of ram, it connects directly to the Dataflyer interface (See *AUI* September review). It can also be used as a stand alone memory board for the Amiga 1500 or 2000.

Trilogic told *AUI* that on the more common two layer circuit board, the width of the power and ground tracks is often limited due to the necessity of fitting both the power and ground tracks on the same two layers. This can lead to erratic and unreliable performance due to interference between the supply currents and signal currents. The 4 layer construction used by Trilogic gives two extra layers on the circuit board to be used as ground and power "planes", separating the power and signal tracks more effectively.

Sybil Will Do Almost Everything!

Blitsoft have told *AUI* that they importing a very interesting device that has loads of uses. It is a "multi-functioned hardware software unit" called, they don't know why, "Sybil".

What does Sybil offer? Well it - should it be she? - allows multi-

read by non-Sybil users. (Not too easy to achieve that...)

This magic little box is also supposed to be able to save an entire disk as 2 AmigaDos files even retaining copy protection. It also has a Super-Card AMI-style back up system and when using multiple drives it compensates for

NEWSPPOINT

MISUSE ACT FAILS

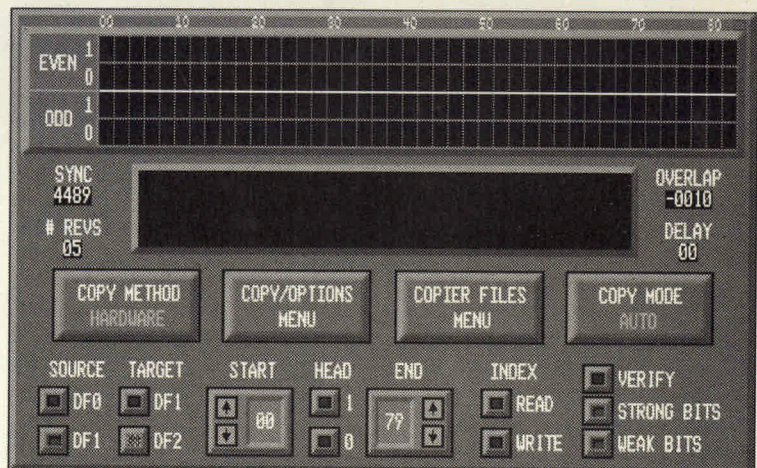
Following the Computer Misuse Act which became law last year, a judge has ruled that Section One of the Act only applies to hacking when one computer is used to gain access to another.

Sean Cropp, the first person to be prosecuted under the Act, pleaded not guilty to securing unauthorised access to a computer belonging to his former employer with the intention of entering a false account and falsifying a computer sales invoice. He was alleged to have made a misleading entry to gain a 70% discount on the cost of a key-cutting machine. He was sent for trial last February under

Section One of the Act. This covers basic unauthorised access to a computer and carries a penalty of six month's imprisonment.

The judge's latest ruling, throwing out the charges, means that besides Cropp now being acquitted, a number of similar cases pending will have to be reviewed, according to the defendant's lawyer. Security experts however, feel that the judge has misread the Act. And while there is considerable consternation among the computing community, lawyers no doubt are rubbing their hands.

No doubt the next judge will ask "And what is a computer?"



Sybil is a multifaceted character.

DOS transfer permitting Amiga, IBM, MAC and Atari files to be transferred to any DOS format.

It also allows the use of Amiga drives to read and write MAC format and through Readysoft will qualify for Amiga II support. It is said to increase floppy disk storage using high density formatting to increase standard DSDD disk capacity to 1.2 Megs, though high density Sybil disks can still be

drive speed incompatibilities.

Blitsoft say that the recommended price will be £89.00. and it will be compatible with all Amigas except the 3000.

If Sybil turns out as interesting as she sounds, she could be worth getting to know well. Watch for a review in *AUI* shortly.

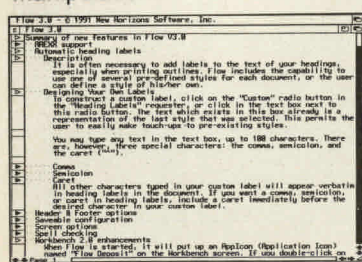
Contact: Blitsoft, 6 Dorney Place, Bradwell Common, Milton Keynes, Bucks MK13 8EL

NEW FLOW

One of the interesting early products for the Amiga was Flow. It was called 'an ideas processor'. Now New Horizons have brought out a new version (What else would New Horizons do?). They say it is a tool that can assist in creating sales reports, school papers, and novels; to help plan business strategies, and schedule appointments to organise your thoughts and ideas. (Most of us could certainly use some thought organising!)

By entering your ideas in an outline fashion, and selectively seeing only the portions of interest, you can bring the important points into sharp focus.

Flow can help, say New Horizons, formulate and organise ideas before writing - anything from short papers to major novels (Yes, of course, they knew you were about to write the great European novel, Well, now you can.); Organise dates and appointments; Organise and track projects and schedules; Create and arrange presentations; Organise and arrange facts and figures and Assist in anything that benefits from efficient organisation and easy manipulation.



RE-ISSUED PRODUCT FLOWING WITH IDEAS.

It goes from automatic outline numbering to multiple text styles and spell checking. Full-featured printing, including headers, footers and custom page sizes. Advanced users will be able to use Flow's macro capability and AREXX port, which lets Flow integrate with other Amiga programs.

The price for organising your ideas, \$110.00.

Contact: New Horizons Software Inc., 206 Wild Basin Rd., Suite 109, Austin, Texas 78746. Tel: (512) 328-6650.

MICROMEASURE v3

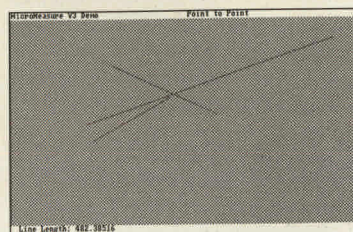
Think Ltd. have told us about an unusual Amiga product - MicroMeasure, a multi-purpose measuring system for Biology, Ecology and Earth Sciences.

It enables you to measure through an Amiga, a whole range of somewhat recondite elements - animal behaviour - path, speed, turning, events; Microscopy and cell biology - particle size, volume fractions, tally counting; Plant Sciences - root lengths, leaf areas; Earth Sciences - areas, lengths of roads and rivers direct from maps or photographs;

It measures distance, angles, areas, path and speed, turning events, co-ordinates and item counts, and has on-screen calibration for instant answers in real units.

It then prints out data and displays and saves data to disk. Think told *AUI* that it is easy to use with 'point and click' functions and pull down menus.

Originally developed as a research tool for insect behaviour studies, MicroMeasure has been expanded to incorporate measurements applicable to a wide range of topics in Biology and the Natural Sciences. The behaviour



aspect is still there, allowing quantitative studies of behaviour, movements and events to be made simply and quickly. A unique zoning feature lets the student examine reactions to single or multiple stimuli and partition the data. It works from video recordings as well as live video from a camera, which means a single experiment can be repeatedly analysed by many different groups.

There is a free demonstration Disk available.

MicroMeasure version 3 is offered to schools and sixth form colleges at a special discounted price of £115.00 plus VAT (list price £495 plus VAT).

Contact: Think Ltd., Prudential Buildings, 46C High street, Edington, Birmingham B23.

THE MUSICAL GRAPHICS PLAYER

There is no holding the ingenuity of Amiga programmers. Centaur's Pixound must be one of the cleverest ideas around. Pixound is a musical instrument which transforms Amiga graphics into unique new music. Load any graphic image (or create one using Pixound's built-in screen generators), then hear it translated into a rich variety of harmonies and melodies using the Amiga's voices, a MIDI keyboard, or both.

You can invent new instruments with every screen, then play them back and explore the relationship between art and music - either automatically or under your control with the mouse. "Dozens of controls to let you create shimmering bursts of notes (Haven't you always wanted to create shimmering bursts of notes?) or slow, lyrical harmonies with just the touch of a key. You've never seen or heard anything like Pixound before." No, indeedy...

You control scales, harmonies,

keys, tonal modes, octaves, rhythms, tempos, voicing, sensitivity and more and perform using MIDI instruments, the Amiga's internal voices, or both. It is compatible with all popular Amiga graphics programs too. You can record MIDI sequences to disk (it's also compatible with all MIDI sequencer software.)

It has a musical paint function which lets you create art and music simultaneously. It will multi-task and grab screens from other programs and it will even Zoom and Magnify to explore the music hidden in graphic details. And it works in all Amiga graphics modes including HAM.

This looks like an exciting and unusual program for everyone interested in art or music - graphic artists, musicians, performers, composers, students and teachers.

All it needs is any Amiga computer with 512K RAM, one disk drive. (Watch for a review in the December *AUI*)

AMIGA KOLN 91

The Cologne Amiga Show is reliably claimed to be 'the biggest in the world'. An estimated 60,000 visitors will attend from the 31st of October to 3rd November.

There will be over 200 exhibitors and it will occupy four huge halls at the Cologne Exhibition Centre.

Sorry but we don't know the German for 'Be there or be square'. But you can watch this space or elsewhere in *AUI* for a report on the show.

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NEWSPPOINT

AND WHY NOT?

Data processing staff in London and the South East earn over £4,000 a year less than drivers and postroom workers, according to a salary survey from Hay Management Consultants. Among 244 companies surveyed, the average Inner London wage for information systems and dp staff was £250 a week, compared to drivers on £335 a week and post room staff on £280 a week. Obviously sorting letters is a more lucrative post.

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The Update Column

CONSTANT FACTORS

This month we're taking a look at some new methods of controlling the Amiga.

Every so often, I get presented with something to review and the first impression is "That's such an ace idea, why did it take so long to appear?". The Concept Keyboard is such a product, just reading about it in *AUI* September's Newsfile flipped what's left of my lid. What is this mysterious beast? The best way to describe it is potentially another 256 keys at your disposal, any of which can be completely user-configured to send a string (including control characters like "shift" or the "Amiga" keys) into the serial port where special software detects it and fools the Amiga into thinking the normal keyboard was used.

The abundance of uses for such a toy are pretty easy to see, especially in the field of education. Most children these days learn rapidly the basics (sic) of using a computer, and the Concept keyboard is a remarkably good means of introducing the subject to even younger pupils or their parents and teachers who perhaps suffer from technofear! An excellent example application of Concept's use is the LOGO language, designed specifically for teaching some fundamentals of programming to children. A simple set of commands are used to control an on-screen "Turtle" (no, not the Teenage Mutant Ninja sort) which is then used to draw shapes by following a path like "Forward 50, Turn right 90, Forward 30, Turn Right...". Typing such commands on a conventional keyboard is pretty daunting for a 7-year old, so the Concept keyboard is used instead with a suitable overlay containing large icons representing only those commands applicable to LOGO. The Amiga need never know how the data was entered and the young programmer doesn't have to type in the usual mistake-ridden way.

Serious application programs also benefit greatly from a Concept keyboard, although the Graphical User Interface has stolen some of its thunder compared to the pre-Windows PC era. However, if you use several word processors, it is extremely irritating to have to re-learn all the key combinations for the various functions which are usually completely different (despite Commodore's best efforts to standardise the interface!). The software included allows the user to define his/her own personal key combinations to be assigned either to individual Concept keys or groups of them for larger

easy to read icons. You could therefore have a different overlay file (containing the different key combinations) for each wordprocessor, but a common overlay map for them all.

Even games are being considered for overlay designs, the first being Sim City for which Think Software are writing an overlay to simplify. The software supplied is simple, but effective. However, there is great potential to increase the scope of this product, and Think are looking to upgrade its specification considerably to allow you to assign entire documents to a single Concept Key in the very near future. Existing owners should check for a decent deal on this.

Other fruitful areas include multimedia and desktop video where complex maneuvers of the display could be assigned to a single key on board the Concept. Programmers benefit greatly from having all their keywords (including some of the more esoteric Amiga specifics) all available at a single press. CDTV users may also prefer this alternative means of talking to their machine, although a longer lead is needed!

I really liked the Concept Keyboard and although it is not cheap (about £190), it is about as child proof as the next piece of hardware, and with the considerable support from Think Software in supplying ready-made overlays, you really can't go wrong. Remember that the Concept will only work with AmigaDOS friendly programs, so Lemmings won't be among the compatible software! If in doubt, check with the suppliers listed below.

More Trackballs

A couple of issues ago, John Kennedy extolled the virtues of his trackball, banishing the favoured mouse into oblivion. Recently, two new competitors have become available so here is the low down on these pretenders.

Firstly, there's a new Alfa Data Trackball sold by Gasteiner for about £29. This is an excellently thought out little toy which fits the hand very nicely indeed. The right and left buttons are located on either side of a central ball, about 4 cm in diameter. In addition to this, there is another button along the base of the gizmo which acts as a select and hold down device. In other words, pressing this once has the same effect as holding the left mouse button down in the normal way. It is very useful for perform-

ing operations such as dragging or resizing windows when movement of the trackball and holding the left button is at best awkward. The mode is turned off by simply clicking the left button.

The other mouse is from Evesham Micros (£29.95), and is a completely different design in that your trackball is located under your thumb, with the usual two buttons at the top of the box. Tough luck if you're left handed. There is no intentional select and hold button as in the previous case, but you can just about hook the left button under the right one, if you try hard, but I wouldn't recommend it!

The most effective tests I could think of to compare the two were a full blooded blast of Gridrunner (ace zap from the Yak), and drawing with DPaint.

Who will use these? The answer is really a matter of personal taste in that some people swear by them, but others swear at them. If your available desk space is limited, then a trackball is most definitely the best solution as it doesn't move anywhere, unlike our trusty rodent! The most effective tests I could think of to compare the two were a full blooded blast of Gridrunner (ace zap from the Yak), and drawing with DPaint as these provide both ends of the spectrum in terms of fine control and responsiveness. The results of these subjective tests were amazingly indifferent, considering the markedly variable design. Once you get used to the idea of rolling the ball, there really is precious little to choose between them as they are a similar price. Having started with the Alfa thing, I preferred this one, but a friend who had the Evesham one won't even entertain the merest thought about giving it back!

Contacts:

Gasteiner: Unit 12a, Millmead Business Centre, Millmead Road, Lomdon N17 9QU. (081) 365 1151.

Evesham Micros Ltd., Unit 9, St. Richards Road, Evesham, Worcs, WR11 6XJ. (0386) 765500

Concept Keyboard Company: Moorside Road, Winnall Industrial Estate, Winchester, SO22 7RX (0962) 843322

"There is another button along the base of the gizmo which acts as a select and hold down device."

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AMIGA USER INTERNATIONAL TOP 10 GAMES

Recommended Games of Recent Months

We did it first, but others copied us! But, you can bet your butt that **AUI** recommends the best.

Lemmings *Psygnosis* £24.99 100%

If you only ever buy one game in your life it's got to be Lemmings. Lemmings is based on a race of simple creatures who will walk into Psygnosis' death traps. Using various skills which you can bestow upon these Walkers you can prevent them from dying and save the Lemming race. It's new, and addictive, with four different game difficulties from fun to mayhem. You'll not find another like it.

Speedball 2 *ImageWorks* £24.95 91%

Spikes, rivets, balls and helmets may all sound a bit kinky, but sex fiends will be disappointed to find that Speedball 2 is a violent future-sport. Steel-plated arenas are the venues for this barbaric variation on indoor soccer. Setting new standards in graphics, with top-notch sound effects and gameplay, Speedball 2 is a bare essential for armchair sportsmen.

PGA Tour Golf *Electronic Arts* £24.95 94%

PGA Tour Golf has ousted Leaderboard from its throne. Hard to believe maybe, but true. Never before has golf been simulated so well on a home computer. Four 18 hole courses are there for your selection, with the option to play against computer controlled opponents. Dynamic features such as dual camera angles, action replays, contoured greens, and 3D fly-by hole previews give it a TV style feel. Realism in the graphics and the movement of the ball create a completely believable environment. A great golf game, that will run and run.

The Secret Of Monkey Island *US Gold* £29.99 93%

This is real quality. Unlike some adventure games, Monkey Island is much more than just a series of puzzles and locations. The graphics are superb, highly detailed and extremely varied. The script is witty, the characters brilliantly created, and the whole thing is full of all sorts of incidental details that lesser games can't touch.

The mouse-driven menu system allows a surprisingly wide range of actions, and there's never the problem of finding words the game understands. There's four disks' worth of adventuring for your money. Not the most difficult adventure ever written, but definitely one of the most entertaining.

Wonderland *Virgin* £29.99 95%

Text adventures don't come any better than those from Magnetic Scrolls, and Wonderland is their best to date. This adventure features pull-down graphics windows and intricately woven puzzles throughout the plot. Using their highly developed WIMP system Magnetic Scrolls have re-vitalised the text adventure. If you are a fan of text adventures then snatch a copy of Wonderland as soon as you can!

Eye Of The Beholder *US Gold* £39.99 97%

EYE OF THE BEHOLDER has achieved what many many RPG's have attempted and failed to do this year.... put DUNGEON MASTER in the shade. Yes folks, it's true. EYE is everything you ever wanted in a dungeon adventure, complex labyrinths, great graphics, believable characters, excellent spell system, battle system and sound system, and above all a gameplay that is simple to learn, and brilliant to play.

Note: Last month we wrongly published Challenge Golf as being a U.S. Gold Game. Challenge Golf is by On Line Entertainment.

Position	Game	Company	Last Month	Rating	Price
1. ▲	Manchester United Europe	Krisalis	(6)	60%	£25.99
2. ▲	F15 Strike Eagle	Microprose	(3)	80%	£25.99
3. ▼	Secret of Monkey Island	US Gold	(1)	93%	£25.99
4. =	Eye Of The Beholder	US Gold	(4)	97%	£39.99
5. ▼	PGA Tour Golf	Electronic Arts	(2)	94%	£25.99
6. ▲	Life And Death	Mindscape	(8)	65%	£25.73
7. ▼	Gods	Renegade	(3)	79%	£25.99
8. NE	Railroad Tycoon	Microprose	(-)	95%	£25.99
9. NE	Hero Quest	Gremlin	(-)	TBA	£25.99
10. NE	Harpoon	Mirrorsoft	(-)	90%	£24.99

NE - New Entry RE - Re-entry ▲ Up ▼ Down = Non Mover

AUI'S GAMES RATINGS

So you've noticed a change in the game review ratings? Want to know what it's all about? Ok, here's the lowdown.

Decision Marked as a percentage, this sums up the reviewers opinion of the game as a whole. It's not an average, but an overall score which takes all the aspects of the game into account, including the price.

Graphics: also marked as a percentage, this tells you how good looking the game is, and considers the variety of graphics and the standard of scrolling and animation, as well as the design of the graphics themselves.

Sound: does the music gee you up in an exciting, or irritating way? Do the monsters go "pop" when you kill them, or scream out a chilling death cry? Once again marked as a percentage.

Difficulty: each game we review is given a difficulty rating from 1 to 10. This rating differs from the rest in that a higher rating is not necessarily better. A game rated with a difficulty level of 1, for example, would be an absolute doddle for even the youngest or most clumsy player. A rating of 10 would reflect an extremely difficult game, which would drive the average player mad with frustration, but hold a substantial challenge for the very best gamers. We take a mark of five as an average.

To help you get a handle on the gauging of the difficulty level rating, this is how AUI would rate for difficulty three classic Amiga games.

R-type: 8/10. Rick Dangerous II: 5/10. F-A/18 Interceptor: 4/10.

ICONS

Every game review is accompanied by at least two icons. First, either a joystick, keyboard, mouse, or any combination of the three will signify the control methods it uses. The remaining icon, or icons, tell you about the type of game. We've decided on six categories: arcade, adventure, arcade adventure, strategy, sport and wargame. While some games fit neatly into these pigeon holes, others almost defy categorisation, so this is just meant as a rough, instant guide. Reflecting this, sometimes you will see a combination of icons; both strategy and sport icons would accompany a football management game for example.

Here are the icons and their meanings:

A Keyboard control

B Mouse control

C Joystick control

1 Arcade game: not necessarily a conversion of an arcade game, but one that calls on quick reactions and good hand-eye coordination.

2 Adventure game: the emphasis is switched to brain power, and the game would usually consist of a quest or mission with puzzles to solve along the way.

3 Arcade adventure game: a combination of two previous styles.

4 Strategy game: this encompasses the likes of chess, management simulations and board games.

5 Sport simulation: this also includes future sports games.

6 Wargames: battle simulations of local, global or inter-galactic proportions.



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Not the Biggest Game in Town...

Years ago, as long-in-the-tooth wrinklies of at least 16 will remember, there used to be an event called the PCW Show. It drew sixty or seventy thousand screaming fans and nothing, especially posters and anything else connected with games was safe from them. Well, not all were screaming or even fans for there was a substantial part of the Show devoted to business.

When the business part split off, the event was converted to an all games affair called CES, the Consumer Entertainment Show. Unfortunately, the second Depression in a decade has taken its financial toll too of the business of software and the games houses think the good old days when money was spent in huge dollops with huge stands to impress the game buying punters is increasingly difficult to earn. So though this year's the Show started out to be all fun and glitz it ended, like the world is supposed to be going to do, with just a whimper.

Virtually at the last week or so, it was changed by the organisers, EMAP, into just a trade show where games software houses stand around trying to impress dealers, each other and the communications media, in other words the consumer magazines like AUI. Here is the report the AUI team filed from the Show That Almost wasn't on the games you just might be playing in coming months. (That's if you don't share the general opinion at the Show that Consoles Rule, OK!)

Storm

The Storm guys were busy promoting three new releases for the Amiga including Rodland, Final Blow, and perhaps the most exciting them all, Double Dragon III.

Rodland is an enhanced version of the classic Jaleco coin-op, starring two fairies, Tam and Rit. This nicely animated platform game should be available now.



▲ Rodland

Storm's other release, Final Blow, is another arcade conversion. As the title suggests, it's a boxing game where you must contend with 10 different opponents (Not all at the same time!). It claims to have the fastest movement and animation of any boxing game. Final Blow is scheduled



▲ Final Blow

"There are over 8000 painstakingly digitised stills to take you over 18 holes. This is the closest move yet to real golf"

to hit the shops on 17th October. (If you win the world championship maybe you too can be accused of raping a beauty queen!)

The most eagerly awaited title from Storm is the third in the Double Dragon trilogy, The Rosetta Stones. There are 5 missions each with 14 streetfighting stages. As expected, there are more moves and features than the previous versions. A representative from Storm commented, "It's gonna be bloody good this time!" He then told AUI that Double Dragon III is currently being made into a film. You can star in your own version when the game is released shortly after Christmas.

Accolade

Accolade has planned no less than 8 new titles before the end of the year. The first, which is out now, is an animated graphic adventure called Altered Destiny. It is a game of puzzles and fantasy backed up by no less than 40 original musical arrangements.

The most innovative forthcoming title from Accolade is a digitised golf simulation featuring Jack Nicklaus, for the CDTV. There are over 8000 painstakingly digitised stills to take you over 18 holes. This is the closest move yet to real golf. We can hardly wait until Spring '92 for its release.

Elvira will be back in The Jaws of Cerberus in mid November. It's the sequel to last year's fantasy role playing adventure developed by HorrorSoft. The game will include more special effects, more sound effects and an improved point and click interface.

Other titles include Casino (Trump II) and add on disks for it, Home Alone, and Bridge V.

Prism Leisure

Here's a great range of games that's bound to sell by the thousands, per week! It's the 16 Bit Pocket Power Collection, a budget range priced at £@2.99 each. They are re-released golden oldies packaged up in a wallet the size of the disk itself. There're 23 titles currently available for the Amiga and more are on the way. Look out for them in computer shops, and newsagents such as John Menzies. (£2.99 is about all most games are worth anyway!)

Zeppelin

Zeppelin will be continuing their release of budget titles from £@7.99. Their November addition to the range will be Edd The Duck, a popular Children's BBC character. The full price range also continues to grow with titles such as Kenny Dalglish's International Vector Football (Yes, that is the title!), Round the Bend (It's a loo-loo of a game!) and, planned for the end of the year, Neighbours. I assume Neighbours will be an arcade adventure as opposed to a shoot 'em up, although some people would prefer the latter. (Most AUI readers being intelligent people probably can do without either!)

Mindscape

The centre of attention on the Mindscape stand was the PC version of Wing Commander II. One official said that it will not be released on the Amiga because our beloved computer can not handle sprite resizing. Surely they weren't talking about the Amiga? However, there are some plans for the original version to be converted onto the Amiga.

The soon to be released Nightmare will be based on the successful Captive interface. Called Nightmare, because of its Anglia TV tie-in, the player has to pit his wits against the puzzles and characters that await in the dungeons. He will also encounter the Tree Monster and the Lord of Fear. Can you keep your sanity and return home safely? Mindscape's MD, Geof Heath, claims he can in spite of his long association with the computer games world.

Domark

Domark have been busy working on 9 titles to take them into 1992. In time for a Christmas release will be Pitfighter, the arcade smash hit. The fighting characters are digi-

FIELD REPORT

Not the Biggest Game in Town...

C O N T I N U E D

◀ tised from real life models and the game promises realtime sprite scaling, pan and zoom effects. Could be a smash hit - ouch!



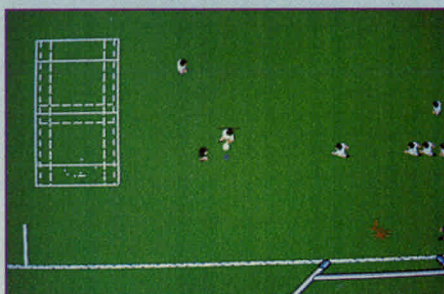
▲ Pitfighter



Rugby - The World Cup, available from the first week of October, for any Union fans out there. Due out around now is Mig 29 M Super Fulcrum which is an enhanced version of its predecessor. The plane you fly is new, so are the landscapes, and you can now take part in a full scale war campaign rather than lots of separate missions.

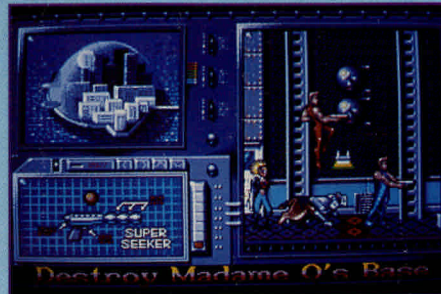


▲ Rugby - The World Cup



One of their star releases will be Thunderjaws - no relation to joint M.D. Mark Strachan. From the open mouths around it looks like a shark-infested Christmas for Domarkians. Just when you thought it safe to ...

"It looks like a shark-infested Christmas for Domarkians"

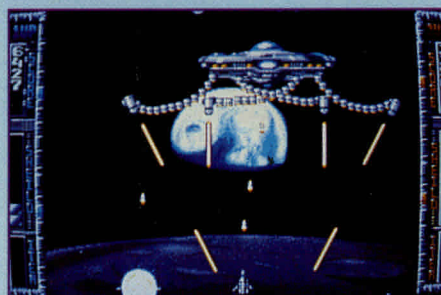


▲ Thunderjaws

If you can wait, Domark will be releasing Super Space Invaders for the '90s. January '92 could see another compilation of five Tengen titles for £29.99. This still has to be confirmed, but the Super Heroes compilation will definitely be available later in year.



▲ Super Space Invaders



Anco

Longtime Amiga software house Anco were not giving much encouragement to Amiga players. Their Tip Off, a basketball sim, looks likely to be a hit following on the now legendary Kick Off.

But founder Anil Gupta, generally thought one of the nicest people in the business, was enthusing greatly over his forthcoming console involvements. And he was not alone in this... A sign of the coming times.

Psygnosis

The leaders in style, Psygnosis are keeping their cards very close to their chest. A follow up to Lemmings, Shadow of the Beast III and new title, Leander are probably their leaders for the end of the year. But it is no secret that they are deeply into "new technologies" i.e. CD. They are one of the few companies capable and adventurous enough to make that market count at an early stage. After all they did it right at the beginning for the Amiga with Bratavus - though we're not sure anyone would want to play that now...

Electronic Arts

E.A. will lead their end of the year charge with Populous II and the long awaited and still being game tested Jez Sans flight simulation, Birds of Prey. E.A. won't comment but a little birdie of prey told us that more than 20 man years of programming has gone into this epic which may never recover the investment... Out for January...perhaps.

They will also be bringing out a Star Trek game. Yes, there will be another after the long-gone Telecomsoft and the P.D. ones. Oh well, there is nothing new under the Silicon Valley sun...

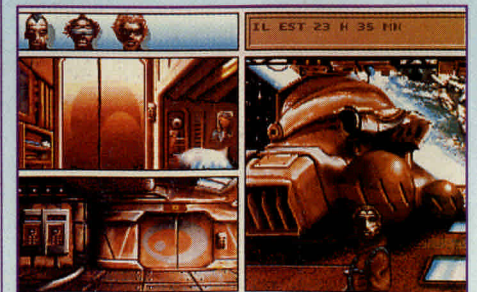
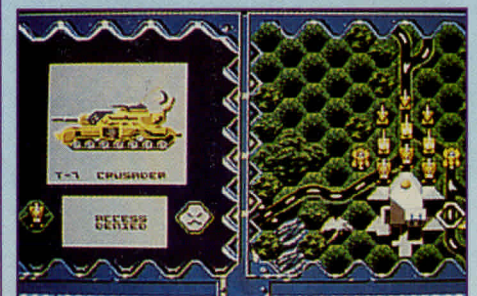
Ubisoft

Ubisoft with their strong continental base are challenging to be one of the top games houses in the world. They plan for hits with Air Combat Aces, an interesting compilation of Spectrum Holobyte's Falcon, Microprose's Gunship and Activision's Fighter Bomber.

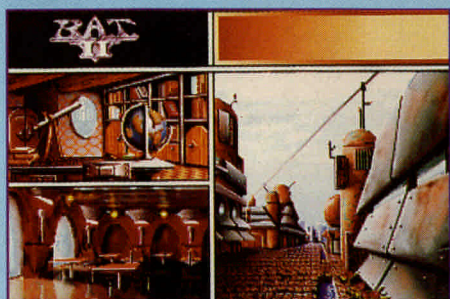
On a similar theme is Air Sea Supremacy which includes Microprose's Silent Service, Thunderbolt, F15 and Gunship, Rainbird's Carrier Command and Mirrorsoft's Wings.



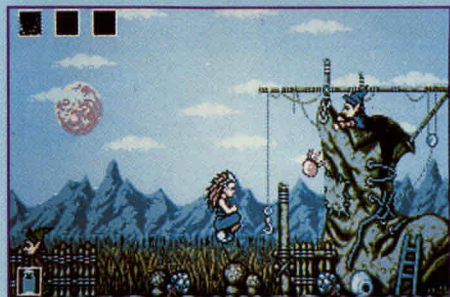
▲ Battle Island



▲ BAT II



▲ BAT II



▲▼ Lightquest



They also have "Quest for Glory" a compilation that has Mirrorsoft's Cadaver and Bloodwych, Microprose's Midwinter and Ubisoft's own admired BAT. (At last, we thought they'd given up selling their own games!)

They have too got some compilations coming out that contain "Ten Great Games". Now that looks like something to keep you busy at holidays...

Their new ones include Battle Isle, an air land and sea strategy game. Pro Tennis Tour II, BAT II, with some really stunning graphics and Lightquest, a role player, and an Rtype type, Starrush.

Mirrorsoft

Mirrorsoft have secured the rights to the next biggest film out, Alien 3. Reputedly starring the new Hollywood sensation Kathleen Campos. The film hits the streets February 92 and the game is hoped to be out by them too. Mirrorsoft claim they won't tell the plot behind the game because that would give the film away. More likely the field director is making it up as he goes along... Anyway we will all have to wait. Other titles coming out on the Image Works labels are Drop Soldier, Tunnels of Doom and Fire and Ice. Their

Mirror Image label gets bigger with the inclusion of old titles such as Austerlitz, Bloodwych and Starglider II. These re-releases will be sold for £9.99 each. Future plans are to include Speedball II, RVF Honda, Wings and Honda, but that's all to come in 1992.

Activision

Since being taken over by The Disc Company, Activision have acquired a distinctly French flavour. They have set up now in the U.K. but their sense of style and their delightful marketing people give the games business a touch of class. Whether their games can live up to that remains to be seen. One piquant fact is that they are suing U.S. gold for allegedly publishing games they shouldn't. Well it adds to the liveliness of the scene doesn't it?

Their forthcoming release schedule includes, of course, R Type II... Yes, the Evil Byte Empire is back as we indicated last month, Shanghai II (You'll either love that or hate it.. there are people who can't sleep at night without sex or a dose of Shanghai II), Bushbuck in which in the year 2010 your task is to collect wonderful artefacts for the year's biggest event a global "Questival". But your bane, the slimy Otto von Slinkenrat (Now there's a good name for an editorial assistant!) has hidden them in distant parts. It includes a travelogue of 206 of the world's most famous cities. Wow!

"There are people who can't sleep at night without sex or a dose of Shanghai I!"



▲▼ Bushbuck



▲▼ World Class Chess



Presently planned for the IBM but probably later for the Amiga is World Class Chess which contains... well, what do you think it contains?..



Linel

One of the earliest creators of games for the Amiga was Linel, based in the not too well-known for its Amiga programmers, Switzerland. They wrote the highly successful Insanity Flight. They are still in the business and have a coming line up of Over the Net, a sports sim, Dragon's Kingdom, Warm Up, a car racing game, Sky Tech and Top Wrestling, yes, you guessed it it's about boxing, sorry, we got that wrong, wrestling. Plus an intriguing sounding, The Game of Life. No details of that yet we are glad to say. If we knew how to win that particular game it would spoil all the fun, don't you think?

Commodore

Commodore had a very private stand at the Show with a suitably discreet presentation majoring on the CDTV. Most of what they had on display, like Xenon II and Falcon, had been seen before but there was one neat remote control pad and trackball combined that looked as if it could be a winner. Trouble was that it is a preproduction model and who knows if it will ever materialise in buyable form?

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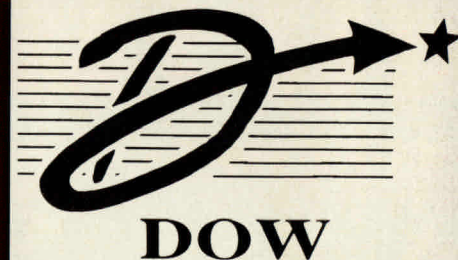
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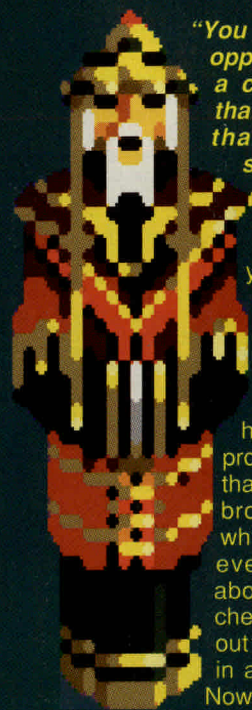
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BATTLE CHESS AND B

BATTLECHESS



"You may knock your opponent down with a chessboard, but that does not prove that you are the stronger player".

Old English proverb.

With that in mind you can embark on the game of Battle Chess. You've heard of it before? Of course, you have. It is the kinky program by Interplay that Electronic Arts brought out some while back that had everybody talking about the way the chess pieces acted out the normal moves in a fantastical way. Now being as original

as every other software company, they have brought out Version II. And it is different enough to merit the serious consideration of anyone who bought Version I or didn't. In case you missed it then, here is a run down on it.

Your opponent can be the computer and with the option of Force Move the manual tells you that you can even interrupt the Amiga's thought process - which is a daunting idea indeed! (Should you just use your Intuition?)

The basic rules are the same as in any chess game and the pieces' moves are traditional. But in Battle Chess "An entire medieval world is at war on the checkered field" with 3D animations bringing colourful scenes alive and stereo digitised sound effects enlivening the battle. As with the board version of the game you can save your current battle, with the ChessSaves disk - useful if you want time to ponder how to escape from a tricky situation, or if you just want to enjoy the aesthetic scene you have created.

Your opponent can be the Amiga (with its thought processes functioning!) or another human, also thinking too, I suppose. You can even play BattleChess against a far away opponent if each of you has a Hayes-compatible modem hooked up to your Amiga. Or you can let the computer play against itself, which is pretty good fun to watch.

There are 10 levels of play and an



The blue dragon (rook) rolls a cannon into a ball and starts bouncing it.

opening library of 30,000 moves. There is also an option for 'Suggest Move' - which will give you a hint for your next possible move. The Suggest Move option will give you a hint by flashing high-

lights appearing on a square occupied by one of your pieces and the suggested destination square.

However with the sophistication of the Amiga I would personally be wary of using this option as the computer may be making suggestions for its own advantage at the next move!

SET TIME

This lets you change Battle Chess' approximate maximum thinking time to any amount you want, from 1 minute to 10,000 minutes. Otherwise the thinking time is set according to the level of play you have chosen from level one at 5 seconds to level 9, the hardest, at 21 minutes, 20 seconds.

The afore mentioned FORCE MOVE makes Battle Chess (i.e. the Amiga) make the best move it has thought of so far.

To suggest that Chess could be fun, would be sacrilege to serious chess players, but the animations do create this notion, so enjoyment, disguised as mental satisfaction could also be achieved!

But to remind players of the serious nature of Chess, an appendix of 20 games as played between chess masters is included.

"You may knock your opponent down with a chessboard, but that does not prove that you are the stronger player".

BATTLE CHESS II
- Chinese Chess

"He who lacks foresight and underestimates his enemy will surely be captured by him". (Ts'ao Ts'ao)

This is a Chinese version of Battle Chess, which includes more pieces, more combat combinations and one piece has a different name depending which side it is on.

In Battle Chess II, the medieval characters are replaced by Chinamen, canons and dragons. Like the first version you can choose from 2D or 3D viewing modes and Interplay have encapsulated many of the fine animation techniques into this Strong Chinese Chess algorithm.

The novice to level 8 options contain similar thinking times, with the 'Force Move' option available as before (yes the Amiga is still thinking hard!)



BATTLE CHESS II

You can change the thinking time and as before you can choose to play another person, who is present (human plays blue, Human plays red) or at the end of a Modem. (Modem plays red modem plays blue.) or against the computer. The 3D board shows all the pieces animating, the 2D Roman shows the Two-dimensional board with Roman lettering carved into the pieces, while the 2D Chinese has Chinese lettering carved into each piece. (You speak Mandarin, of course?)

The central theme in all forms of chess is that chess is a representation of battle without the randomness or inequalities of real bloody hellish war. Both sides start the battle with equal numbers of pieces and except for the advantage of the first move, each side is even.

The beginnings of chess can be traced back to seventh century India, where the game was called 'Chaturanga'. Soon it spread to the nearby regions of Persia and China. By the eleventh century, the game had migrated throughout Europe by way of Spanish and Italian traders. During this time it underwent many changes until it became the version that is played internationally today.

The Chinese version of chess differs from its western counterpart in reflecting the Chinese culture and philosophy. For instance, since the Chinese were the earliest developers of gunpowder, a piece representing a cannon was added to the set. Each piece has a unique history which

reveals something of Chinese culture. The river in the middle of the board represents the 'Celestial River' or the Yellow River dividing the northern territory from the southern territory.

Chinese chess has greater scope of movement because of the larger board. Each side has an Imperial Palace made up of nine points in which the King, Counsellors, Ministers, Knights, Rooks, Canons and Pawns play. Ministers and Counsellors cannot leave the Imperial Palace so are only used in defence.

Because of limitations on many of the pieces, Chinese Chess games are generally shorter than conventional chess games, although winning is in the time honored traditional manner of putting your opponent in checkmate or stalemate.

Personal advantage is very important in this second version of Battle Chess as the King has limited movements. It is common to win or lose in the first few moves of a game. Not surprisingly, whole volumes have been devoted to the different possibilities of Chinese chess openings. (Well worth reading... if you spend all that time setting up your modem with your long distance player it will be somewhat frustrating to lose in the first few moves!)

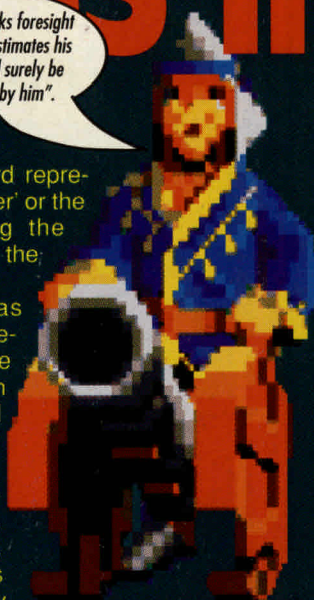
Master Wang said "When a cat is at the rat hole, ten thousand rats dare not come out, when a tiger guards the ford, ten thousand deer cannot cross." With that thought - whatever it might mean - and the appendix of fictional games from history, chess, it seems, could take on a whole new meaning. I wonder what the Amiga will think about it!.

Martin Witton

"Bananas with soy sauce, check it out, mate"



"He who lacks foresight and underestimates his enemy will surely be captured by him".



DECISION

86%

Just as Battlechess I had a peculiar violent charm, this latest version has an enjoyable feeling of oriental character added to the normal intriguing challenges of chess.

Graphics: 88%

Chess is chess, but the graphics element of this game has always been its strength

Sound: 78%

Clunks and bangs, but what do you expect from a board game derivative?

Gameplay: 90%

If you like chess what more can you ask from a Chinese version?

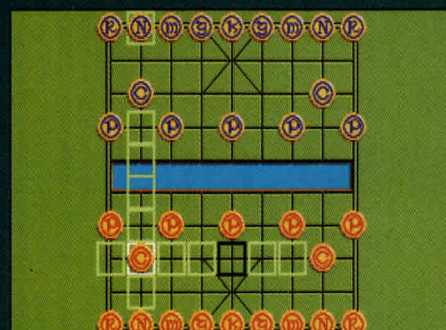
Difficulty: 5-8/10



With nowhere to run to, the Chinese King is put into checkmate and yet another game is lost!



When taking a piece a small animation occurs. In this instance the enemy rook changes into a dragon and slaughters the poor defenceless pawn.



This is the 2-D Roman view. It shows more clearly how a Cannon (C) can only take a piece by jumping over another.



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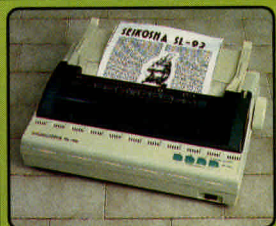
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Level one kicks off with some pretty gruesome zombies. Get 'em between the eyes and watch them explode.

BEAST BUSTERS

ACTIVISION £25.99

The city is overrun by the walking dead! Zombies are appearing from everywhere, staggering from tube train carriages and even riding motorbikes in search of human prey. These beasts are not stupid though, unlike many of those in the films, and besides being able to drive, they can shoot, hurl knives and make petrol bombs. It is not only the zombies that you must contend with, but also the huge dogs and owls that appear constantly around them. These are easily dispatched with a single shot, although they tend to move faster than the zombies who can sometimes take two or three shots. Remember, the best way to kill a zombie is a head shot; forget the arms and legs and go straight for the brain.

Beast Busters is yet another rehash of "Operation Wolf", a point-and-shoot type massacre, but this one has an added "attraction", namely the extreme gore content. When one of the undead is shot or blown up, a fountain of blood and pus is showered over everything within range.

The zombies themselves are quite well done, looking like something out of Dawn of the Dead, and the sound effects are pretty realistic too. At the end of each scene you must confront a larger and deadlier member of the undead, such as a fire breathing hound or two fat zombies



wearing hockey masks, and these too expire in a graphic and colourful manner. One problem with the game is that at the end of each scene there is a pause for loading which is far too long. These breaks are irritating, especially when you are really getting into the game and just want to carry on without delay.

The graphics are good, especially the city backdrops, subway stations and streets that look suitably run down and chaotic. Some of the buildings can easily be destroyed with a few blasts from your machine gun or with the extra weapons that you pick up as they fall from the top of the screen. These weapons, usually grenades or rockets, can kill a few of the beasts at once, so it helps to use them only in an emergency (as when they're driving straight at you) or against the larger beasts.

All in all, Beast Busters is fast-moving and fun. What better way is there to relieve everyday stress than blowing away a few thousand hungry corpses. The same could be said for "Operation Wolf", but that lacks the fantasy element, making it somehow more gross. The gorier and more creative deaths in Beast Busters definitely rate higher in my opinion, as does the presence of legions of squirming zombies. Fun but not for the squeamish.

Matt Russell

DECISION

75%

Highly enjoyable splattery hocus. Fast moving and quite addictive, although the familiar point-and-shoot routine is becoming hackneyed.

Graphics: 76%

Overall pretty impressive, with smooth scrolling and detailed characters.

Sound: 62%

Wolves howl painfully when shot, and the explosions and bullet hits are convincing, although there is not much in the way of music.

Gameplay: 70%

Very playable and addictive for a reasonably long time, but constant playing would probably become tedious and seem repetitive.

Difficulty: 6/10



Here's the second level guardian. In a reversal of the final scene from American Werewolf in London, he changes from man to werewolf before dying.



Between the levels you're kept informed of the story so far.



In the lift shaft now, you can shoot that bird and get him to drop the zombie.

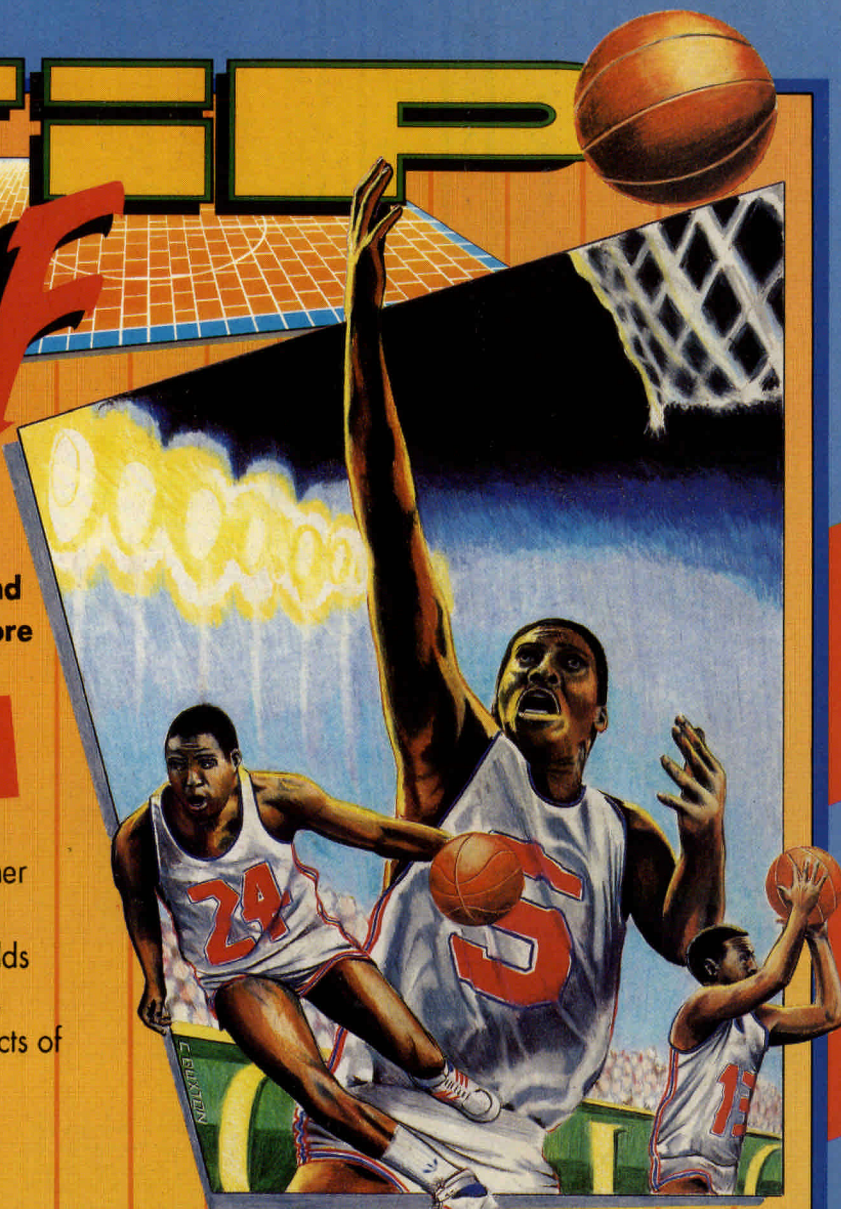
TIP OFF

The sheer pace of the game, end to end action and tactical game play is the core of TIP OFF, a basketball simulation -

A SIMULATION WHICH IS GREAT FUN TO PLAY

Players' skills, attributes and fitness together with the astute substitution of players and change of tactics banks by the coach, holds the key to success in basket ball. TIP OFF, therefore includes some managerial aspects of the game. The main features are:-

- * Multi directional scrolling screen
- * Five skill levels. Skill level of both teams can be set independently.
- * 1 to 4 players option. Option to play against the computer or another player or team up with another player against the computer or another player or two players.
- * Facility to practice skills and tactics.
- * Facility to create a team at all skill levels and design tactics.
- * Instinctive Joystick controls to dribble, pass, shoot or do a dummy.
- * There are two running speeds, two types of dribbling and passing and five types of shots at the basket (Jump shot, Hook shot, Skyhook, Running Jump shot and Slam Dunk).
- * Each player on the court is an individual with a unique mixture of attributes (Age, Height, Flair, Pace, Stamina and Composure) and skills (Passing, Dribbling, Stealing, Shooting and Jumping).
- * Two types of Leagues. Action Replay at 3 speeds.
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Hitting Toasterville

FIELD REPORT

MADE IN THE USA

CONTINUED FROM PAGE 20

Toaster will work at a much higher resolution than the current model, maybe in anticipation of the new high quality television protocols that pop up on Tomorrow's World every so often. Without being desperately committal about things, Randall did intimate that the next release would be available in PAL and NTSC simultaneously. Until then, if you are particularly keen to get Toasting, watch this space for an article on how to go about using the NTSC version in PAL land and converting it to run on your own telly.

few and far between but watch out for them shortly in *AUI*.

What sort of success has the Toaster enjoyed? NewTek won't actually release detailed figures on their sales, but estimates from various people in the know vary between 15-30,000. Bearing in mind that this represents mainly US sales (that old NTSC problem again), the real impact of the Toaster could be yet to come. The world in general is currently enjoying a little recession in economic terms, but NewTek's Kiki Stockhammer pointed out that such a climate plays

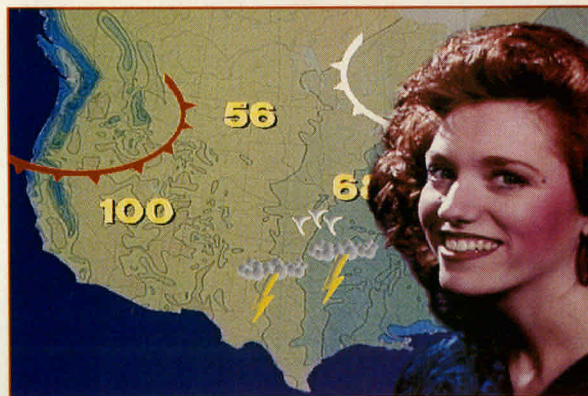


Toaster Workstation for \$8995. "Doesn't need a computer."

Enough speculation and back to some semblences of normality. Although the hardware upgrade is a long way off, NewTek have not sat back on their considerable laurels, waiting for the next \$1 million to drop onto the door mat. The software that accompanies the Toaster has been upgraded with another two banks of video effects, just for starters. Some 64 new transitions have been added into the system, with some very weird and wonderful effects such as the screen dissolving into clouds or raining sheep (tailor-made for a certain Jeff Minter, maybe?). I liked the "broken glass" effect where the picture fractures into jagged pieces to reveal the next shot underneath, just like the professionals! It's only a matter of time before someone develops a means of allowing the user to design their own transitions, eliminating the need for pre-defined ones. Also promised are some enhancements to LightWave and ToasterPaint, but details on these are

directly into the Toaster's hands - it is after all a budget device replacing equipment costing hundreds of thousands of dollars so uncertain companies with little spare cash are snapping up the Toaster in preference to the professional gear, yet getting the same performance. The impact on NewTek can hardly be understated - even 15,000 lots of \$1495 represents a manageable \$20 million slush fund. Most normal people would go on a spending spree, buying executive jets and sports cars with such a loot. NewTek are by no means normal people but they did go out and lease a jet with a pair of NSX (\$80K) sports cars. The latter are easy to justify to the accountant as a necessary expense for they were displayed at a show with the sign "Buy a Toaster and then you can get one of these NSX cars with the money you saved". The incredible thing about this is it's probably true!

Beneath all the madness and relaxed atmosphere, NewTek are obviously a very



The Toaster luminance keying can combine one image with another.



The Video Toaster's two frame buffers: one can be loading while the other is shown for seamless live presentations, Toaster F/X can be done between live video and the buffers, or between the buffers themselves.



"Even 15,000 lots of \$1495 represents a \$20 million slush fund."

competent company, even aggressive in promoting both the Toaster and the Amiga which makes it work to even greater heights and to completely new markets, previously dominated by PCs and Macs. This cannot be a bad thing, and the next generation of hardware promises to bring the Toaster revolution firmly to our side of the Atlantic. Another step toward new dimensions for the Amiga in which we all will share.



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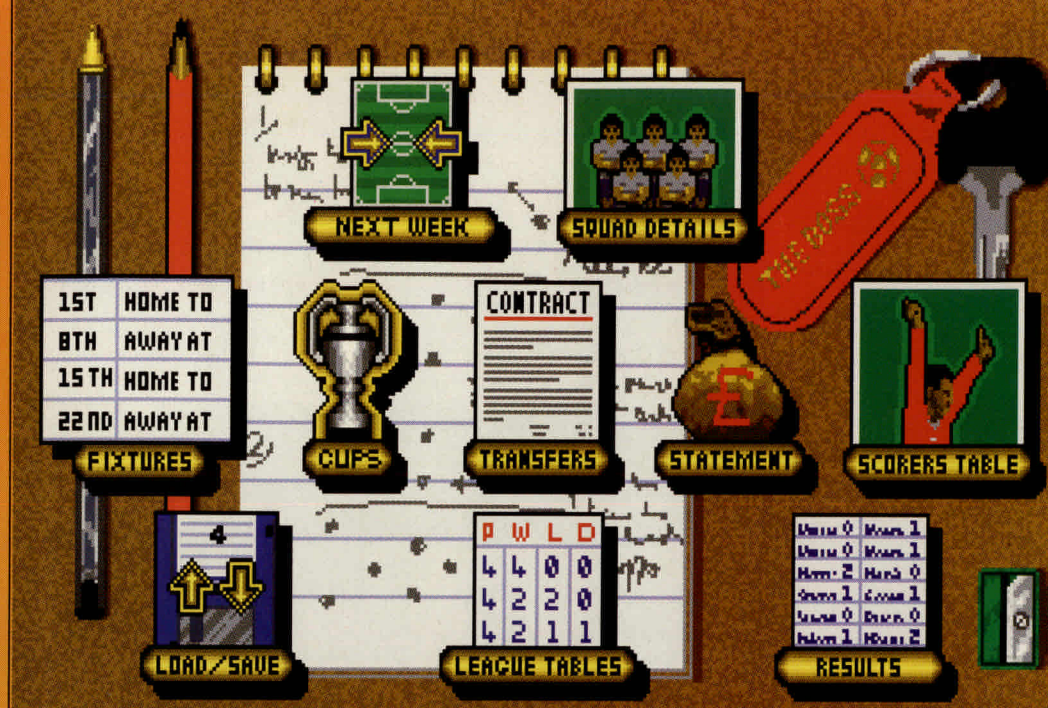
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Here's the main menu, in all its golden metallic glory.

Striker Manager

D & H GAMES

When the debonair game designer Kevin Toms invented his classic Football Manager, I doubt he realised he was in fact creating a whole new brand of game that would still be spawning clones a decade later. It may be a pointer that Football Manager was way ahead of its time, but since then, similar games have shown a disappointing lack of development. Anco's Player Manager aside, there really have been no major innovations in footy management simulations. All you do is compile a few databases of teams, players and skill levels, throw in a bit of wheeling and dealing, and there's your game. Oh, there's one other thing: the name. This is even easier: just prefix the word "manager" with any other football-related word.

Okay then, let's be fair. There has been one advance since the Spectrum days, and that's the mouse and icon control. Striker Manager uses icons for its main menu screen. Fortunately we're not completely at the mercy of the icon designer, because the icons are labelled according to their functions.

Moving around the game's various screens is easy enough, and probably the first thing you'll want to do is go through each of them. While I was browsing the options, I came across the menu for selling players. I thought I'd off-load my least impressive player to raise a bit of cash, so I sold a lame substitute to Manchester United. Flicking back to the main menu, I decided to get the first game underway, but was told I hadn't selected a full team. Because I'd sold a sub, I didn't have enough players to make up a squad. So, I went to the transfer option to see who was on offer.



Instead of giving you a list of all the available players, the game insists you pick each team from the list, one by one, and see if they have anyone up for transfer. This wouldn't be quite such a huge drag if you didn't have to sit through a slow screen-wipe between every click of the mouse. After ten or fifteen minutes, I'd still found no-one on offer, and was forced to reload the game from scratch.

I'm not going to disregard the game on the basis of one unfortunate encounter, and if the rest of it were fine then this quibble could be put to one side. Unfortunately, it slips up just as embarrassingly in other areas. The matches themselves can be influenced by your input during the "arcade" sequences. If you saw anything like this in an arcade, you'd laugh your socks off. The players run around in what looks like completely random fashion (try playing Kick Off with the mouse for a similar effect). Your part involves pressing the firebutton, when a line at the bottom of the screen is pointing in the direction of the goal.

Another feature that plays a big part in the game's downfall is the results service, which scrolls up results of the other matches, and threatens to go on doing so for ever! Couldn't we just see the revised division tables flashed up?

If these major irritations were compensated for by other interesting, exciting, deep, or otherwise innovative features, it could have been a worthwhile effort. As it stands, life's too short. Due to the joystick-port dongle, the game won't run on an Amiga 2000.

Tony Horgan

DECISION

40%

A frustratingly slow and uneventful football management game with nothing new on offer.

Graphics: 20%

Football Manager's match highlights were more convincing on the Spectrum.

Sound: 0%

None at all.

Gameplay: 46%

There's something here for desperate footy managers in need of a fix, but others should steer clear.

Difficulty: 5/10



During the match, the game reaches fever-pitch (well, it's sickening at least).

MATCH DETAILS MEMO

Sunderland 1-1 Leicester City

Attendance: 15,179

PLAYER	G	NOTES
T. Norris		
B. Marwood		
K. Smith		Took A Knock
E. Brown		
J. Atkinson		
M. Gore		
C. Peaff		
N. Platt		
D. Sinclair		
Tone	1	
P. Barker		
S. Marshall		
P. Barnes		

CONTINUE

The after-match report tells you of any injuries, and highlights the fact that super-striker "Tone" was the team's only scorer.

ENGLISH DIVISION 2

PS	CLUB NAME	P	W	D	L	GD	Pts
1	M.B.A.	1	1	0	0	4	3
2	Oxford Utd	1	1	0	0	3	3
3	West Ham Utd	1	1	0	0	3	3
4	Oldham Athletic	1	1	0	0	2	3
5	Port Vale	1	1	0	0	1	3
6	Blackburn Rovers	1	0	1	0	0	1
7	Brighton	1	0	1	0	0	1
8	Leicester City	1	0	1	0	0	1
9	Millwall	1	0	1	0	0	1
10	Sheff Wed	1	0	1	0	0	1
11	Sunderland	1	0	1	0	0	1
12	Newcastle Utd	1	0	0	1	-1	0
13	Plymouth Argyle	1	0	0	1	-1	0
14	Bristol Rovers	1	0	0	1	-1	0
15	Wokingham Reds	1	0	0	1	-3	0
16	Carlisle Utd	1	0	0	1	-4	0

Week 2 of 1991 LMTG:29

CLUB DATA FIXTURES PERFORMANCE EDIT MENU

After the first game of the season, our team is positioned eighth in the second division.



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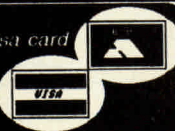
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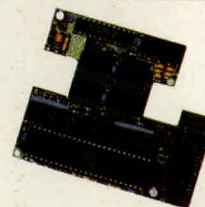
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see nothing in the future, Robin. I fear
more I can do for thee.



ADVENTURE

NEWSDESK

MIRRORSOFT ARE LEGENDARY

Tag, creators of BLOODWYCH, a very capable RPG that was well received in these pages, have really made their role playing point with their next release, **LEGEND**. Set in a dark sad world, where joy is a distant memory, and only dark power rules (and The Fat Lady hath not Sung), the inhabitants have been stripped of their own free will and seek an individual who can attain legendary status, which in turn will provide them with the will they need to fight back. Achieving this of course, is not easy, and will involve a long journey through the land, exploring many dungeons of danger. The game features two distinct graphic styles, using 2D animated screens for the kingdom locations, and the dungeon sequences being presented in isometric 3D. One to watch for I suggest.

Also PSS are coming out with a Tolkein story, as their software writers Beam still hold the computer rights to the masters work. **RIDERS OF ROHAN** which spans part of the Lord Of The Rings trilogy, (not to be confused with the unofficial EA/ Interplay Lord Of The Rings game) is billed as the first game to do justice to Tolkein's

NOW!

WITH ANDY MOSS

It is that time again. Earls Court London springs to mind, where everybody who is anybody, everything that is anything come together to see just what is in store for the coming year. Yes folks, the 1991 consumer entertainment show has rolled around once more. I think that this year's show will herald the coming of age of computer games. The zapping arcader is being usurped by the role player, adventurer, strategist and thinker, and software houses are realising that they cannot get away with a pretty simple platform game with jolly music anymore. The buying public now demands a challenge and adventure and strategy provides just that. Until then the feast on this months column of solutions and reviews, plus a peek at a great new role playing board game Solar Trader. But first the news. . .

great works. Described as a strategy war game with a twist, **RIDERS** will have a multitude of sub plots and animated arcade sequences, with graphics that promise to be in keeping with the highly visual nature of the books.

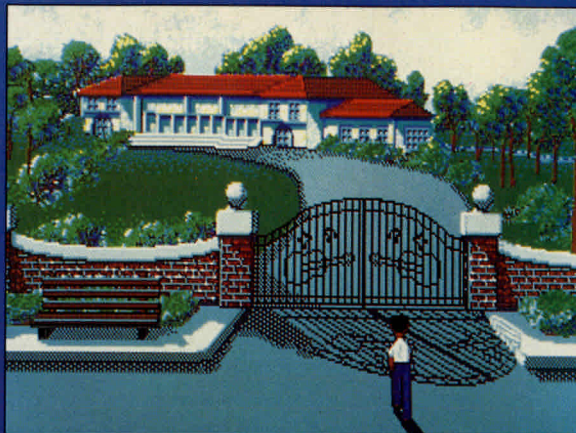
Finally, on the Cinemaware label, is a double double bill of 4 past releases, **TV Sports Football/ Basketball, Lords Of The Rising Sun** (great) and my favourite, **Wings**. All for 36 quid, a good buy.

MILLENIUM GO LINCOLN GREEN

Distributed through US Gold, Millenium have two new releases that ooze class. **ROBIN HOOD** is akin to Populous in look but has been ten years in the making! This massive real time adventure has you as Robin, the Earl of Loxley trying to win back Nottingham Castle, taken from you by the Sheriff. Plenty of character interaction is promised, with the whole of Sherwood Forest to explore. Listen in on conversations, recruit your Merry Men and live the life of an outlaw, but of course you must steal from the rich and give to the poor. Also from Millenium comes **CHINTOS REVENGE**, 400 screens strewn with mazes, traps and hazards. You must guide Chinto through forest, lake and gardens to the well guarded city, where the evil overlord must be found and defeated.

SOLAR TRADER - A NEW ROLE PLAYING BOARD GAME.

As a Solar Trader, you hold the key to the Earth's energy crisis, with the chance of bringing back a Solar Energy Crystal from the uncharted planetoid Zastra. The precious commodity, desperately needed by Earth and only found on this distant frontier must be exchanged for Gold, Silver and Diamonds, which is badly needed by the Zastrans to stop their planet being drawn into the Black Hole and disintegrating. You must trade wisely, starting with only a mere 30 credits to your name, and build your resources in preparation for the long journey to Zastra. By trading between the many planets in our solar system, and discovering what cargo is sought for the most profit, even maybe resorting to a bit of contraband on the side, you can build and prepare your craft for its final hazardous journey. I played the game with some friends, and we all attempted to trade in a different way, which is the beauty of the game, nothing is standard. Utilising 10 and 20 sided dice over 86 playing pieces are used on a 22 inch fully illustrated airbrushed board that is testimony to the professional way the game has been designed. Go get it for Christmas. Available from Solar Games 8 Medina Place, Hove Sussex. Price: £19.95.



Governor from Monkey Island. To do this, collect all the mugs from the Scumm Bar, and go to the kitchen, where you will need to fill one mug with grog. Now, the grog will start to melt the mug, and you need to get Guybrush to the prison, so begin the walk there, and just before the mug melts, pour the grog into another mug, and so on until you reach the prison. Pour the grog over the lock and it will melt and free the prisoner, who will run away, but do not fret.

Next show the ransom note to the Sword master who will agree to join you on your quest, after that visit the NM corner of the island and get across the divide by using the rubber chicken as a pulley/ slide. Go visit the man with the tattoo on his chest

and prove your worthiness by passing his test (petting his parrot hidden behind a multitude of barriers). Go back to the shopkeeper, and get him to open the safe by asking for a credit note and saying that yes you are employed. Watch carefully how many times he moves the handle, and come clean by telling him you are unemployed. Last chance to look at the combination as he puts the note back in the safe! Tell him to go to the swordmaster again, and he will go out of the shop. Open the safe now and get the note, and take it to Stan's Used Ship Emporium. Stan who by the way is my favourite character, he is very funny, will try a lot of old sales pitches on you. The ship you want is moored at the top of the screen, the one that

came from Monkey Island originally. Go through all the extras with him, saying no each time until he repeats himself. Make him an offer of 5000 (the credit note is worth that) and he will eventually accept it. He will sail it around to the dock where you will meet the others, and start your voyage to Monkey Island.

All that is left to do is sail the ship to the Island and rescue the Governor. But the crew are lazy and insist on sunbathing, and the governor is marrying a ghost! What to do? Watch out for next months thrilling final instalment.

SOLAR TRADER

The Space Trading Adventure Game

Set in the first years of the next century, Solar Trader is filled with imaginative elements, exciting possibilities and has long term appeal. In selling, negotiating, and trading, Solar Trader is a unique game, a mixture of its quality, interest and fun.

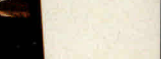
This is reflected in the 2 years it has taken the original idea to evolve to its present form.

The absorbing game is full of choice and variety, and is ideal for most groups and ages. With its many differing aspects, both amusing and educational, it will prove fun for all the family.

As a Solar Trader, travel to the furthest reaches of the Solar System seeking your fortune by trading essential commodities between Earth's far flung colonies.

Trade wisely and prepare your craft to complete the hazardous journey beyond the Black Hole to the mysterious planetoid Zastra. Exchange your precious cargo of gold, silver and diamonds to bring back a Solar Energy Crystal, the answer to Earth's energy crisis.

Contents include a superbly illustrated 22" x 28" square four sided trading game board, 86 playing pieces, interplanetary credits, 24 cards, 10 and 20 sided dice, rule book, and players guide.



LOOK OUT FOR SPACE QUEST IV

Yes, it is true, SPACE QUEST IV Amiga is finished and ready for shipping! Once again Roger Wilco is up against the dreaded Sludge Vohaul, only this time he is reincarnated in a ghastly new form. The PC demo version was stunning and I for one cannot wait to see what the real thing looks like on the Amiga. With great sound, classy graphics dripping with colour and a game speed that I am reliably informed is much quicker than past Sierra releases, you cannot go wrong.

CREATE YOUR OWN WORLD

Hot on the heels of its highly acclaimed Universal Military Simulator, Rainbird has announced the launch of the UMS II Planet Editor and two scenario disks.

Establish landscapes and climates and set up cities, assign armies, allocate weapons from bows and arrows to nuclear arsenals. A whole world with which to play God. What more can you want?

MONKEY ISLAND SOLUTION PART II - THE VOYAGE

Last month, we left Guybrush needing a crew and a ship to go and rescue the

ADVENTURE REVIEWS

LES MANLY IN THE SEARCH FOR THE KING ACCOLADE £24.95

I think Accolade have been really unlucky with this one because it first came out on the IBM, and has been well over a year waiting to be converted to the Amiga. In that time Sierra have had smashes with their Leisure Suit Larry series, and even though Accolade hate us to compare the two, you cannot fail to see the similarity. For Larry Laffer, read Les Manly, both start off as failures with girls, money, and business, and both have



terrific humour throughout, along with pretty graphics and original music scores.

But let me say here and now, **SEARCH FOR THE KING** probably deserves to do better. For a start, the author has written a preface about how he did not just want to port across an IBM clone onto the Amiga, but instead use its great facilities to enhance an already good adventure. The game was completely rewritten and it shows. Larry Laffer, on the other hand suffers from his conversion with weeny sound and at time jerky animation and slow loading (the usual Sierra fault).

Both concepts are fun to play, but I just feel for Les more because he has had no mega publicity like Larry has had.

What about **SEARCH FOR THE KING**? Well, it is loosely based on a search to find Elvis Presley, the King of Rock 'n Roll, although due to legal reasons that is never said, and instead he is referred to just as 'The King', the greatest entertainer of all time.

Les is a small time employee at WILL TV who have just put up a \$1 Million dollar prize to anyone who can find 'the King'. They figure, that as he is supposedly dead it is a sure fire bet that their money is safe, but the ratings will soar with the publicity in the mean time. In order to win the heart of his boss's secretary, Les decides to ditch his job and go search for the King in true animated adventure style. There are no scrolling screens though, each scene is loaded in separately, but quickly, and the animation is equally fast. The puzzles though are a different matter, with a few very tricky ones that just about appear tenuous. For instance there is one scene

where a security guard is dreaming whilst sleeping on the job, and you get the chance to see what he is dreaming about. The reason for this is that you need to **TAKE THE DREAM!!!** to use later on in the game. A bit obscure to say the least, but I am assured by Accolade that the sequel will carry puzzles that are a lot more logical.

Apart from that, the graphics are very detailed, even down to showing the reflection of Les in puddles in the road, a nice touch that. And the end sequence is very tastefully done, and a fine tribute to many great music stars who are no longer with us. I will not spoil it for you but can anyone get me front row seats in the Angels Theatre?

PUZZLES 90%
OVERALL 93%



BILL AND TED'S EXCELLENT ADVENTURE ACCOLADE/CAPSTONE £24.95

I have read quite a few unfair previews of this release, mainly criticising how easy it is to play, and what a naff storyline it has. Firstly, Bill and Ted is a major box office movie smash in America that hasn't reached our shores yet, and the games storyline more or less follows the films plot. Secondly, the game is specifically designed for a very young audience, so any one who reviews it who is over twelve, should find little difficulty in completing it.

I tried it out on my ten year old daughter who spent all day determined to finish it, and who clearly was enjoying herself tremendously. Great. So any one out there looking for a junior logical game with a few platform arcade sections to keep the fun side going should take a look at this one.

Bill and Ted are students at San Dimas High, and are sent on trips through time by their friend Rufus, who has perfected time travel via his telephone box (they obviously haven't heard of Doctor Who in America!). They need to write a history exam, and unless they get a passing grade (six historical figures brought out of history) they will be doomed to do military service.

The game contains digitised shots from the real movie, and four levels of difficulty,

with some pretty graphics and lots of whacky situations!

Is Beethoven really Van Halen in disguise? How do you get Michael Angelo off the ceiling? How do you get Joan of Arc to cool down while she is burning at the stake, and does Marie Antoinette eat cakes while she is dieting?

All this and more will be revealed, but remember for juniors only. Dad must not go near it.

GRAPHICS 85%
PUZZLES 70%
OVERALL 80%

THAT'S IT FOR ANOTHER MONTH. LOOK OUT NEXT TIME FOR SILVERBLADES, THE LAST PART OF MONKEY ISLAND AND THE CES NEWS.

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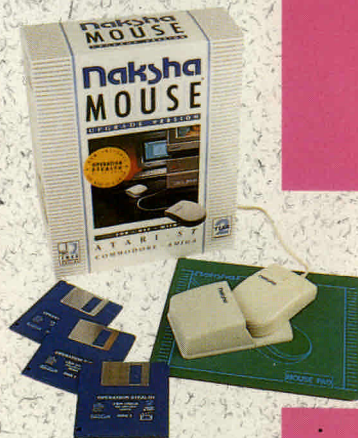
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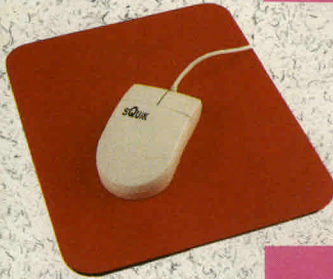
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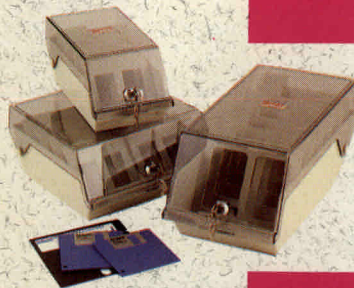
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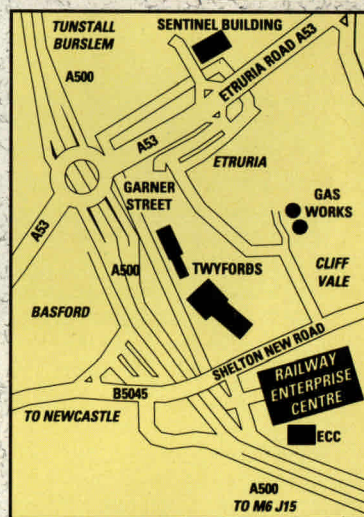
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Graphics Workshop

The packaging may look like part of a fifth form project, but the program is a real jewel. Dressed up like a sow's ear, the Graphics Workshop painting and animation program is a silk purse - one of the finest post-Deluxe Paint III packages I have seen, actually leapfrogging Dan Silva's masterpiece in some crucial areas.

Most software writers have probably given up trying to take on Deluxe Paint by now; it's the Mike Tyson of Amiga graphics. But for every Goliath there has to be a David, and in this case his name is Steve Hines, author of Graphics Workshop who has been nurturing this gem for four years.

In a nutshell, the program offers the conventional drawing aids Amiga artists have come to expect as standard, improved on many of them, and welded on

At AUI we realise that software is a serious business - for the user, and also the author. That's why we took the trouble to ensure this review of Graphics Workshop was based on the latest released version. Others may have looked at the package earlier - but when we tested it, we found it to contain damaging and annoying bugs, a fact acknowledged by author Steve Hines. The original manual needed an IQ of 199 to understand too - and reviewer Peter Lee, even with an IQ of at least that, found it confusing. So he spoke to Steve Hines in California and told him as much.

Feedback pays dividends, and Steve Hines later supplied us with the upgraded version of his program, together with a much-needed and improved tutorial manual, which redresses a lot of the problems.

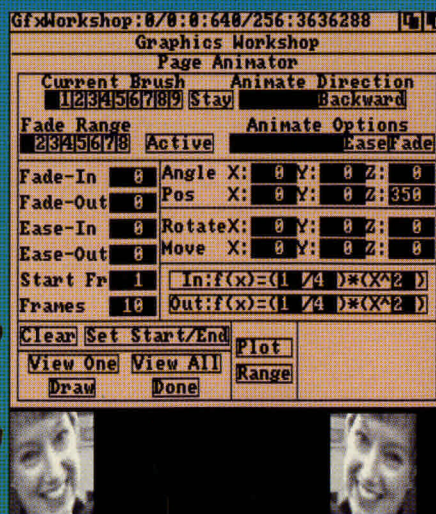
So we may not be, as we generally are, first with the review in this case - but we care enough to make sure you, and the people writing professional software, get a fair deal.

You can't tell a book by its cover - and the same goes for an outstanding new art package, whose rough exterior hides a real diamond. Peter Lee digs in and finds something precious.



Overlaying the zoom window is the fill requester, giving access to a number of options - from colour-range fills, to brushes.

"One of the most innovative features of the software is the ability to define up to 20 different palettes on screen at once."



The page animator requester. Not quite as complicated as it looks, but with this many options, some early confusion is bound to happen to begin with.

both cell and page animation features. It offers the finest combination of graphics and animation you could hope for, and in my opinion its animation facilities surpasses DPaintIV's in a number of areas.

The program comes on a single disk, and occupies 617K of storage - so it is hardly surprising that a minimum 1.5 megabytes of RAM is suggested to run the program. It is unprotected and can be transferred to a hard drive. Lack-lustre efforts have been made to include some graphic tutorial examples on disk, but as they fall into the pathetic category, it would have been kinder to have left them out. Why professional artists aren't hired for this kind of shop-window work is beyond me.

When you start Graphics Workshop, a resolution requester opens up on the workbench screen, offering various configurations, including PAL, plus options for overscan and number of colours up to 64. HAM, however, is NOT available, which hobbles it a little, when compared with DPaint IV.

Pull-down menus are supplemented by tool icons - for lines, curves, rectangles and so on, and there are many keyboard shortcuts to access the program's features.

So, on the surface, like most Amiga art programs, but delving a little deeper uncovers a radical assortment of features. To focus on just a couple - the toolbox contains icons to define polygon shapes (very much like the ones used in Aegis Animator) which once constructed can be rotated to the desired angle before being stamped onto the image. They can also be automatically filled with the current brush choice.

Colour dithers are easily achieved too; selecting a foreground colour, then picking another with the right mouse button will create a chequer board mix of the two, effectively creating a greater number of perceived colours with no change of mode. This works best in higher

GfxWorkshop:0/0:0:640/256:3647112



"Brush control is very powerful, but straightforward - clip out an area or load one in, then either paint with it or manipulate it."



Brush one is selected as the current fill pattern. That's it in the small window. Below is the current range of colours, should a range fill be selected.

resolution modes where it will clearly be of more use due to colour limitations, and incidentally where the pixel mixing effect is far less noticeable than in, say, low resolution.

One of the most innovative features of the software is the ability to define up to 20 different palettes on screen at once (and remember, this isn't Hold and Modify either). Incredible - but true.

This means that selected horizontal areas can have totally independent colours from the rest of the screen. It is an intriguing option, though one limited by the necessity to have palette areas defined as the full width of the screen (but depth is a matter of choice - from a few lines to most of the screen if you wish).

Defining a colour area is simply a matter of dragging up or down on-screen bars, and once defined they can be edited freely - moved, deleted and so on - though you cannot overlap one area onto another.

I was impressed to find other options usually found only on graphic manipulation software - useful programs such as Pixmate or Butcher.

For example, you can make the current picture into a black and white image; this gives a stark, silhouette effect and uses the current foreground pen colour as the threshold.

Or you may like to convert a coloured image into greys; you have to have defined the greys in your palette for this to

work. It is easy, too, to create line art by using the trace options, and you can also anti-alias individual colours for smoother edges.

As if this were not enough, one of the features claimed by Graphics Workshop is the ability to grab the screen of any other program running concurrently. If no open screen is found, it will wait until it finds one. It even claims to have the sense to re-configure itself to the mode of the grabbed screen, and asks if you wish to change your current palette. I have to report, however, that all this did on my A2000 was to grab the program's drawing screen.

Brush control is very powerful, but straightforward - clip out an area or load one in, then either paint with it or manipulate it. A bonus is the ability to have in store ten brushes in a library, each with its own palette, and call on one as and when needed. Individual colours in brushes can be filtered (i.e. made transparent), masks can be created, the background removed, it can be flipped, resized, sheared and rolled (which allows you to scroll the brush like a frame of film).

The rotate command remembers the last angle used for repeat manipulation, and there is an innovative ripple command which wraps the current brush on a wave which is defined as you move the mouse around. You can even 'stuff' a brush between either horizontal or vertical boundaries of any complexity.

Included in the drawing modes menu are rub-through (for exposing the spare screen through your current image), stain, tinge, halfbrite, drop shadow, and halfbrite shadow. Incidentally, the shadow parameters can be set by the user. The half-brite option is superb here, allowing the instant creation of realistic darkened shadow areas with oddly-shaped brushes in 64 colour mode. (for instance, if your brush is the statue of liberty, the halfbrite shadow you cast when painting the image down will follow the shape exactly.)

Brushes can also be manipulated in 3D space, the numeric keypad controlling orientation around the three axis points for true perspective.

The program also has a zoom option, which opens up a magnification window which can be moved and resized. I found this somewhat unpredictable - sometimes there was nothing at all in the enlarged window.

Graphics Workshop introduces the concept of objects - in simple terms these are areas laid on top of your screen (or on top of each other in layers) which do not remove any of the image underneath. They can be drawn on, moved or deleted, and saved at will. They are really mini drawing areas independent of what's on screen and can be resized and grouped together, and can 'soak-up' the image they overlay if you wish.

ANIMATION

Graphics Workshop features not only the standard frame animation facilities most art/animation packages opt for, but cell animation too.

Cell anims present a more complex challenge to the animator. The program's claim to make the process as easy as possible is over-optimistic, to say the least. This problem has now been partially solved thanks to the supply of a new tutorial manual which is a clear guide to the hidden complexities of the original manual, and the program's amazing array of features.



TEST DRIVE

Graphics Workshop

C O N T I N U E D



The two rectangles show the start and end positions of a brush prior to cell animation. They were placed manually.



This is the workhorse behind the cell animator, which is as complicated as it looks! The inclusion of a tutorial manual with the package, however, explains things precisely.

Cell animation improves on simple linear frame animation by allowing you to allocate changeable move-paths, plus precision event timing.

Again, this is reminiscent of Aegis Animator, where an object's path over a number of frames can be defined as a series of locations, drawn on screen using the mouse, and subsequently edited.

A range of fine-tuning aids is available within the movement editor, and this together with a number of effects - spins and rotations - gives an added punch to animations. Be prepared to work hard for good effects though.

The Page Animator editor offers ac-

"Cell animation improves on simple linear frame animation by allowing you to allocate changeable move-paths, plus precision event timing."

cess to any or all of the current library of 10 brushes for manipulation.

You can move, rotate or fade brushes whilst moving along set directions; these can be entered either as parameters, or done on-screen using the mouse to lock the brush at its start and end points. Multiple brush movements are defined and laid down concurrently, so all the rendering can be undertaken in one fell swoop using any or all of the library brushes.

The resulting animations can be saved as ANIM files (as indeed can the cell anims, though in their case there will be no chance to edit them in cell mode afterwards).

PROS

- * Probably all you will ever need in a non-HAM graphics/animation package.
- * Bristling with options to enhance your artwork.
- * Out-paints and out-animates DPaintIII on many fronts.
- * Many unique and useful features for the dedicated animator.
- * Utilises both cell and page animation.

CONS

- * Some features take a long time to compute.
- * Users who are accustomed to having things handed to them on a plate should be wary of the program's complexities.

* The magnify option sometimes behaved badly - the image disappearing from the zoom window if the pointer was used outside on the wider canvas.

* I could not get the grab screen function to work at all - except to grab perfectly the Graphics Workshop art screen, which is clever, but absolutely pointless!

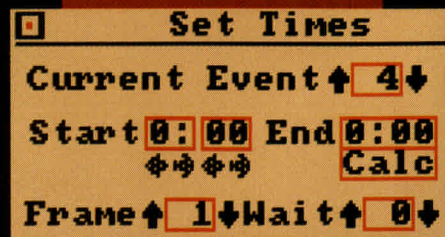
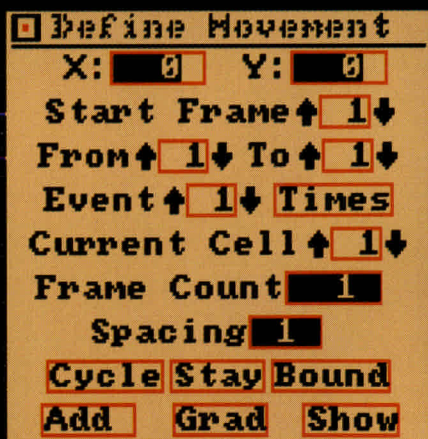
* HAM not supported.

CONCLUSION

Chances are you may never have heard of Graphics Workshop before; it came as a big surprise to me to discover an art/animation package which can show Deluxe Paint a thing or two. It is the most feature-packed art package I have seen so far for the Amiga, combining unique options with all the standard requirements artists have come to expect. A major leap forward in Amiga animation-art. It is complex due to its array of features, but is an extremely competent and useful professional package for experienced Amiga users, despite a few irritating hiccups.

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No-one said this would be easy - there are many options in the animation facilities, with choices leading onto further requesters.



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It's new, it comes in a black folder. Price: £49.99

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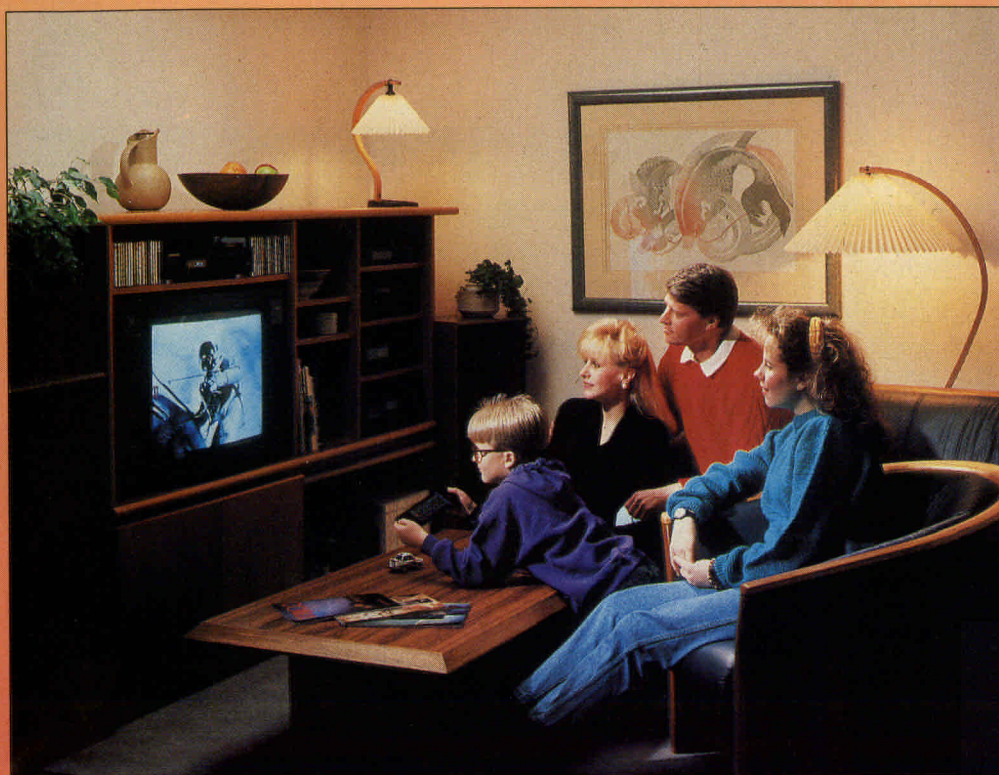
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cdtv the magic black box

Successful Launch

CDTV was launched at the British Academy of Film and Television Arts in Piccadilly on 30th April 1991. Around two hundred and fifty people gathered for the occasion - an auspicious start for this new form of home entertainment. Commodore seemed to have got it right!

Just in case one of our readers missed all the media hype, CDTV means Commodore Dynamic Total Vision and not, as jokingly suggested in a recent *AUI*, "Commodore Desperately Takes Valium". It is a magic black box which matches in size and shape a video recorder and has a neat horizontal remote control pad. Disks are inserted in the front slot via a caddy. These disks may be audio CD, CD+G or CDTV.

Being interested in anything Commodore, we ordered one. It was to come with the 'Welcome' disk and two others. The 'Welcome' disk duly arrived with the machine - the others came later. We decided that it should be used as promoted by Commodore - home entertainment

and not a computer. Our CDTV was connected to the TV set and not to a computer monitor.

Don't be put off by the 'Welcome' disk Disillusionment set in. The 'Welcome' disc was far from welcoming. It should have been the flag-ship of the Commodore fleet! What a missed opportunity to display the full potential of the CDTV. We understand that this was not the fault of CBM UK



who had to suffer what had been prepared for them.

The audio quality is poor when used with the TV, improving when connected into the HiFi system. The vital information on how to use the CDTV is not well presented. However, it must be memorized - it is your only guide. **THERE IS NO MANUAL.** Please, please, Commodore give us a manual. Even a TV or a washing machine comes with a manual.

TEST DRIVE

C O N T I N U E D

They seem to be carrying this "We mustn't frighten the Technofearful or Dixon's won't sell any" message a bit too far.

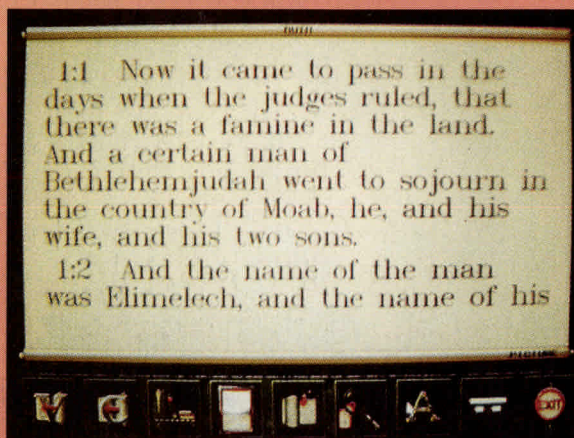
It's a Karaoke machine!

Fortunately we already knew that the CDTV has great possibilities. We had seen the 'MUSIC MAKER' CD when it was demonstrated by developer, Jim Hawkins, at the ICPUG South East weekend at Charmouth. 'Music Maker' uses the full interactive potential of CDTV. There are seventeen tracks to which you can listen, look, play-along, or drum-along, plus a music quiz. In addition it allows you to play-along to other standard CDs in your collection - real entertainment.

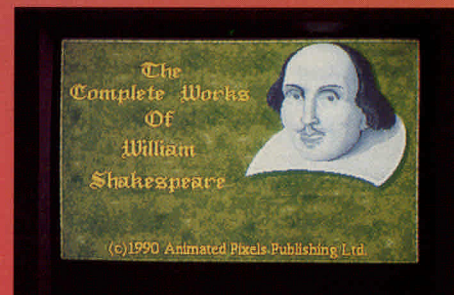
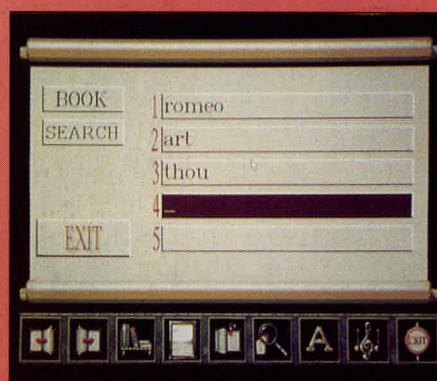
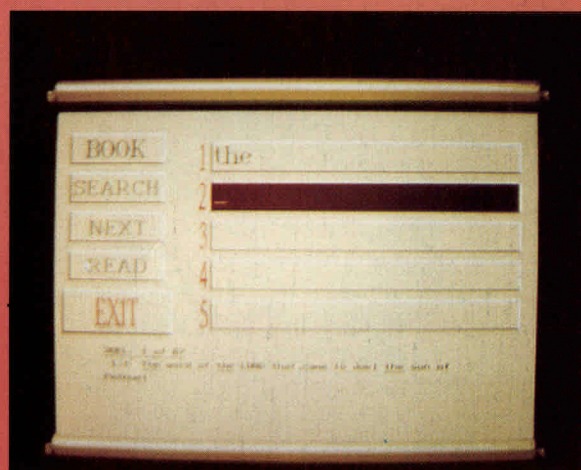
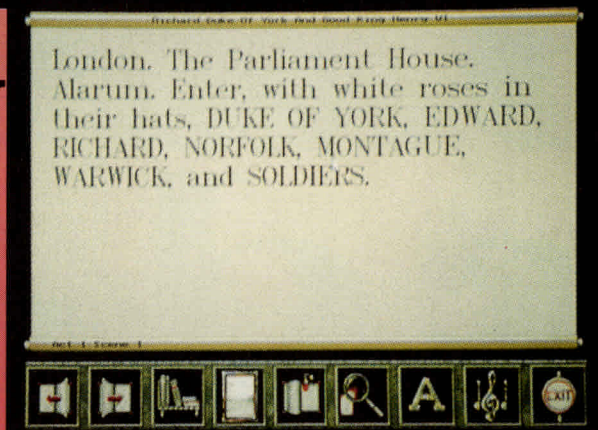
Incidentally some audio CDs are CD+G, and when played on a CDTV words and graphics appear on the screen - a karaoke machine!

More disks arrive

The two disks "bundled" with the machine arrived. 'LEMMINGS' in any for-



cdtv the magic black box



mat is intriguing. It is addictive - you have just got to save all those little creatures from extinction. The well-illustrated manual states that the recommended method of control is a mouse or CDTV track-ball unit, which are not yet available, but the remote control is adequate. There are over 100 play levels and it could require a lifetime's dedication to the "Save a Lemming" campaign.

In my opinion the edition of 'THE HUTCHINSON ENCYCLOPEDIA' which we received was not ready for release. For instance, it is impossible to obtain a map of Germany - only Luxembourg appears on the screen!

Attica Cybernetics assure me that the second edition will be a great improvement and early purchasers will be entitled to a 80% discount.

World Vista is Superb

With relief we turned to 'WORLDVISTA'. This is superb and real interactive multimedia. With this audio-visual atlas you may explore the entire world through maps, photos, music and language. Two hundred and twenty countries and over fifty cities are covered in detail.

There is folk music from each country and over a thousand photographs, plus key words and phrases in sixty languages. From your armchair, you may travel the world. The maps are detailed. A Flight Engineer recently returned from Iraq was able to pinpoint the positions of Iraqi installations. 'World Vista' is unsurpassed as a reference guide and for the armchair traveller. Every home and school should have this disk.

On-Line Entertainment

'WOMEN IN MOTION' from On-Line Entertainment is based on Eadweard Muybridge's encyclopedia of movement. These 19th century historic photographs may be animated, printed out or loaded into an art package. It is a disk for adults, in particular those interested in art and early photography and gives an insight into the moving form.

The disk is not easy to use as the pointer (cursor to you!) is grey on a grey background. One for the specialists.

Also from On-Line comes 'HOUND OF THE BASKERVILLES'; good family entertainment - just the thing for a long winter's evening. You can watch it like a film, read it like a book or play it for real - the choice is yours. You are presented

with Dr. Watson's notes of the case and you can follow in Sherlock Holmes' footsteps clue by clue. It will keep the family quiet for hours.

The D.J. in a Box

One CDTV disk which was demonstrated at the 16 Bit Show in July is CD REMIX from Microdeal. Marketed as "The D.J. in a box", it enables you to sample, resequence and mix your favourite music CD. Over 100 sample sounds are on the disk. There is a comprehensive tutorial in the manual. You will need a 3.5" external floppy drive to save your sequences - you cannot write to a CD!

Bookworms need BookWORM

There are two disks currently available from Animated Pixels, both using their unique BookWORM authoring system. This allows the disc to be played on either the CDTV or an IBM PC CDROM drive. The ILLUSTRATED HOLY BIBLE has a good tutorial and positive screen colours. The disk contains the whole text of the King James' bible, with illustrations. There is a full word search - a boon for the student or theologian.

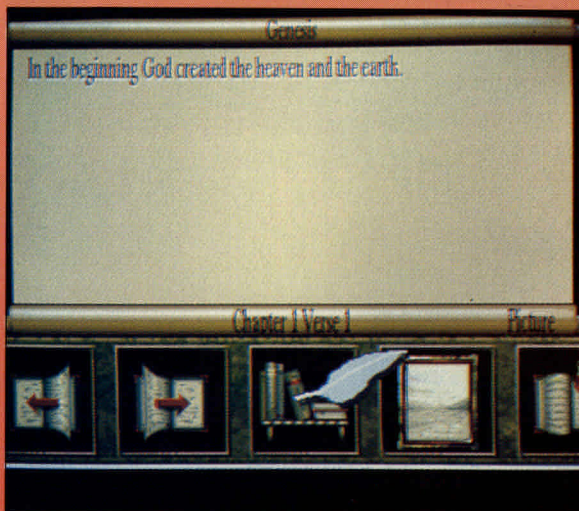
The other disk, the ILLUSTRATED SHAKESPEARE contains his complete works including plays, poems and sonnets. The BookWORM system gives an extremely fast search time for a word or a phrase. Fonts may be selected for ease of reading, and a slideshow of woodcut illustrations is included. Both disks are ideal for students, schools, and libraries and for family reference.

Another family reference disk is DR. WELLMAN from Digita International, which is being marketed by Commodore. Unfortunately, Commodore were not able to let me have a copy of this disk.

Three Months Old

In three months the CDTV has taken its first steps in the market and

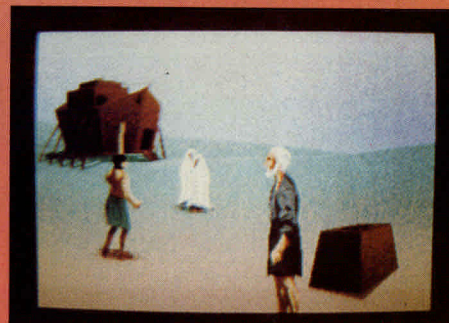
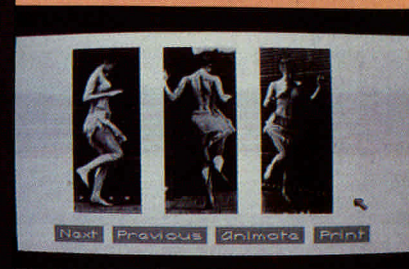
there are many exciting disks in the pipeline. A strong advertising campaign is planned for the build-up to Christmas



"Every home and school should have this disk."

and it should do well. It is good family entertainment and will be invaluable as a teaching aid in schools and colleges.

Let's be honest - it is bound to do well. Inside the CDTV is an Amiga 500 with a CD ROM drive just waiting for Commodore to release the peripherals. Already owners have discovered that fitting an external 3 1/2" drive allows many Amiga programs to be used, and the FredFish collection is available on a CD!



When the part screen broadcast-quality video, which we have already seen, comes along as promised by Commodore's erstwhile consultant and now CDTV Supremo, Jim Mackonakie, and we see everything from Shakespeare's plays made interactive with you in the role you want (you want to play Juliet?!), to computer-style games with live actors, then Commodore's new baby should really start to grow fast.

CDTV DISCS - In Order of Review

WELCOME DISC

Commodore FREE with CDTV

MUSIC MAKER Music All ages

Music Sales R.R.P. £34.99

LEMMINGS Entertainment

All ages

Psygnosis FREE with CDTV

R.R.P. £34.99

HUTCHINSON ENCYCLOPEDIA

All ages

Attica Cybernetics FREE with CDTV

R.R.P. £49.99

WORLD VISTA Reference

All ages

Applied Optical Media R.R.P. £54.99

WOMEN IN MOTION

Arts & Leisure Adult

On-Line Entertainment R.R.P. £29.99

HOUD OF THE BASKERVILLES

Entertainment All ages

On-Line Entertainment R.R.P. £29.99

CD REMIX

Music All ages Microdeal

R.R.P. £29.99

ILLUSTRATED HOLY BIBLE

Teens & Adults

Animated Pixels R.R.P. £34.99

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Digita International R.R.P. £54.99

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Now you can get the best... with PEN PAL!

A superb package, with immense power, to fulfil all your word processing requirements and... it includes a Database! It's all so easy to use, you probably won't need to refer to the extensive 250 page manual too often.

Whilst working, you can open up to four documents simultaneously (memory permitting), search and replace; cut, copy and paste; check your spelling with a 100,000+ word dictionary. You can import your favourite IFF/HAM graphics, from programs such as DPaint II or Clip Art files in various sizes and colours. You can automatically flow text around graphics in any Workbench compatible font (there are over 200 available styles), in different sizes and colours to suit your design... even as you type. All this from a word processor and... Much, Much, More!

As you can see, this is not just any ordinary word processor! Full Page View with position, edit and creation of graphic objects. Mail Merge using the built in database and forms designer. Creation of templates for complex reports, into which the database can be merged.

Operating with 32 fields per record, and 32,000 records per database with a fast sort of 1000 records in less than 5 seconds this is a *real* database.

Pen Pal requires an Amiga 500/1500/2000 or 3000 with a minimum of 1 megabyte of available memory.

Pen Pal

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£79.95

"...its handling of graphics is unsurpassed: Pen Pal is the only program I tested that will automatically wrap text about graphics..."

Amiga World...Jul. '90

"...without beating around the bush Pen Pal is very special..." - "There is little to fault Pen Pal and it deserves to do well."

Amiga Format...Dec. '90

"...I am extremely pleased with your product especially the Graphic Capabilities within the Word Processor. Having the Database on the same disk has made PEN PAL the best program I have..."

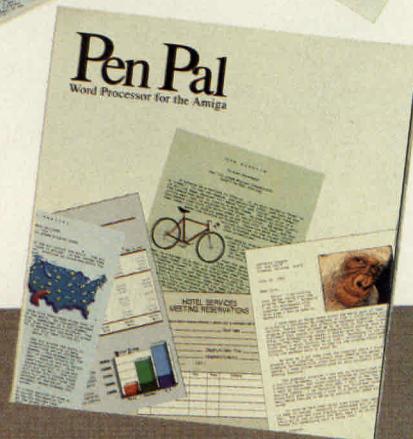
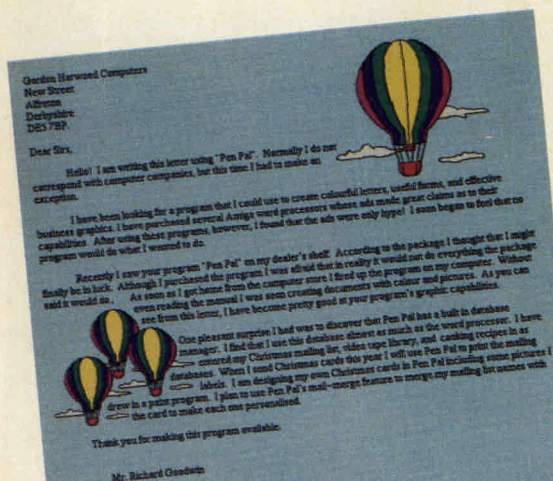
D.S.B., Plumstead, LONDON

"...Please let me tell you how amazed I am at how EASY IT IS TO USE PEN PAL. The manuals supplied are very informative and very clear..."

P.S.S., Clifton, NOTTINGHAM

"...A most excellent piece of software..."

E.P.H., Strathclyde, SCOTLAND

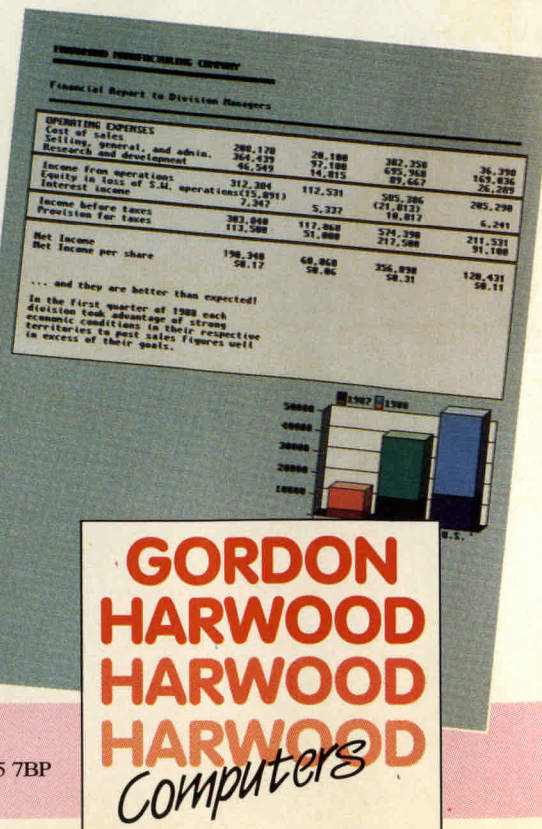


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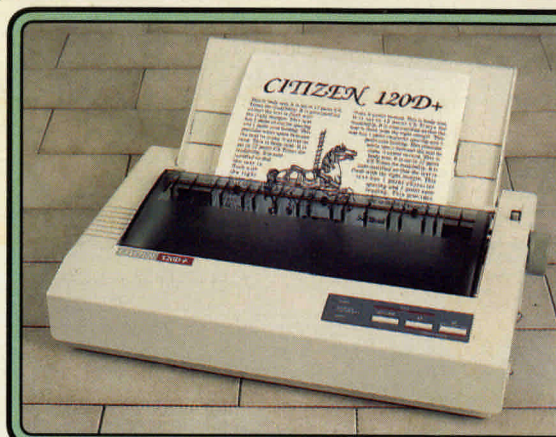
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- Epson and IBM Emulation
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RRP: £199
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TOTAL RRP: £224
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- Epson and IBM Emulation
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STARTER KIT: £25
TOTAL RRP: £293
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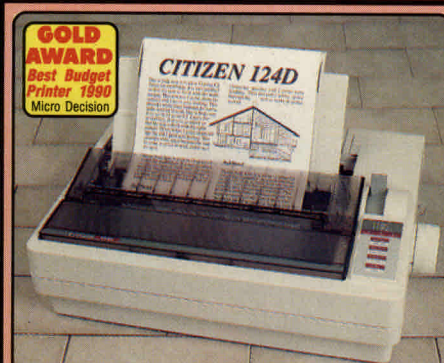
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- Citizen Swift 9x - 9 pin - 136 column
- 192cps Draft, 48cps NLQ
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- Parallel Interface
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- Epson and IBM Emulation
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- FREE Silica Printer Starter Kit

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COLOUR KIT: £41
STARTER KIT: £25
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STARTER KIT: £25
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24 PIN PRINTERS



COLOUR

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- Citizen Swift 24 - 24 pin - 80 column
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- 8K Printer Buffer + 4 Fonts
- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson and IBM Emulation
- FREE Colour Kit
- FREE Silica Printer Starter Kit

RRP: £385
COLOUR KIT: £38
STARTER KIT: £25
TOTAL RRP: £448
SAVING: £199
SILICA PRICE: £259

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COLOUR

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- 192cps Draft, 64cps LQ
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- Parallel Interface
- Graphics Resolution: 360x360dpi
- Epson, IBM and NEC P6 Emulation
- A3 landscape printing - FREE Colour Kit
- FREE Silica Printer Starter Kit

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COLOUR KIT: £41
STARTER KIT: £25
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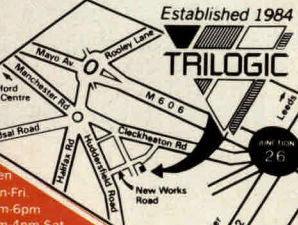
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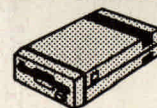
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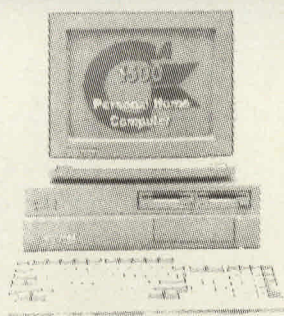
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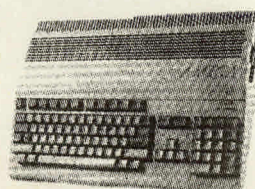


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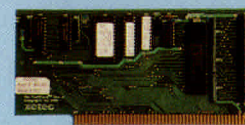
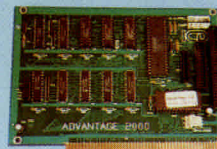
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TEST DRIVE

Who can tell what's real and what isn't? John Kennedy certainly can't and he has problems as he visits his local Amiga art gallery.



I imagine that you are walking down a corridor in a moodily lit art gallery. To the left and right of you are amazing computer-generated pictures. The blue and white chequered floor is so shiny that you can see your own reflection in it, as you walk to the end, turn left and discover a whole new corridor.

I've been walking around that gallery recently, but there is a problem: it doesn't exist. Before you reach for the telephone to get the men in white coats to take me away, look at the picture on last month's front cover. It's only one of two hundred frames from an animation produced here in the **AUI** offices on an Amiga 2000. The finished 15 second mini-epic is a walk around a square gallery, with various famous Amiga works of art on the walls. It took a weekend to render on an 68040 board, and the finished anim file is larger than 12 megabytes. Why on earth did I do it?

TEST DRIVE

Real3D

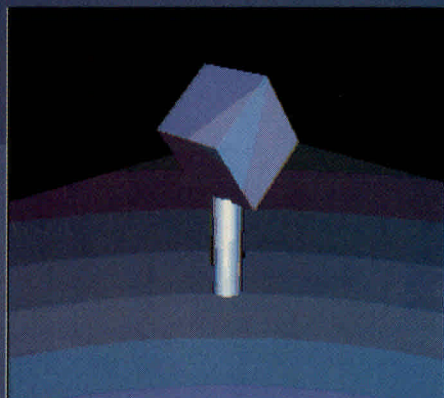
C O N T I N U E D



I did it for two reasons. Firstly it was fun, and secondly it was easy. I was employing the 1.3 version of Real3D, probably the most impressive ray tracing package I've had the pleasure of using. We reviewed an earlier version of Read3D in the November 1990 issue, but the current 1.3 version and the imminent 1.4 more than merit another look.

Three views

When you first load Real3D you're presented with a rather intimidating display composed of four small windows. If you've ever done any technical drawing recognition will soon dawn, for what we have here is a front elevation, a side elevation and a plan view of whatever objects you're going to design. Even if you haven't had the pleasure of doing an O level in Technical Drawing (like what I did), you'll soon grasp what's going on



Your first render. Without any lights and with default materials it makes for dull viewing.

"You are rendering pieces of dull grey metal floating in black space. We need to get real"

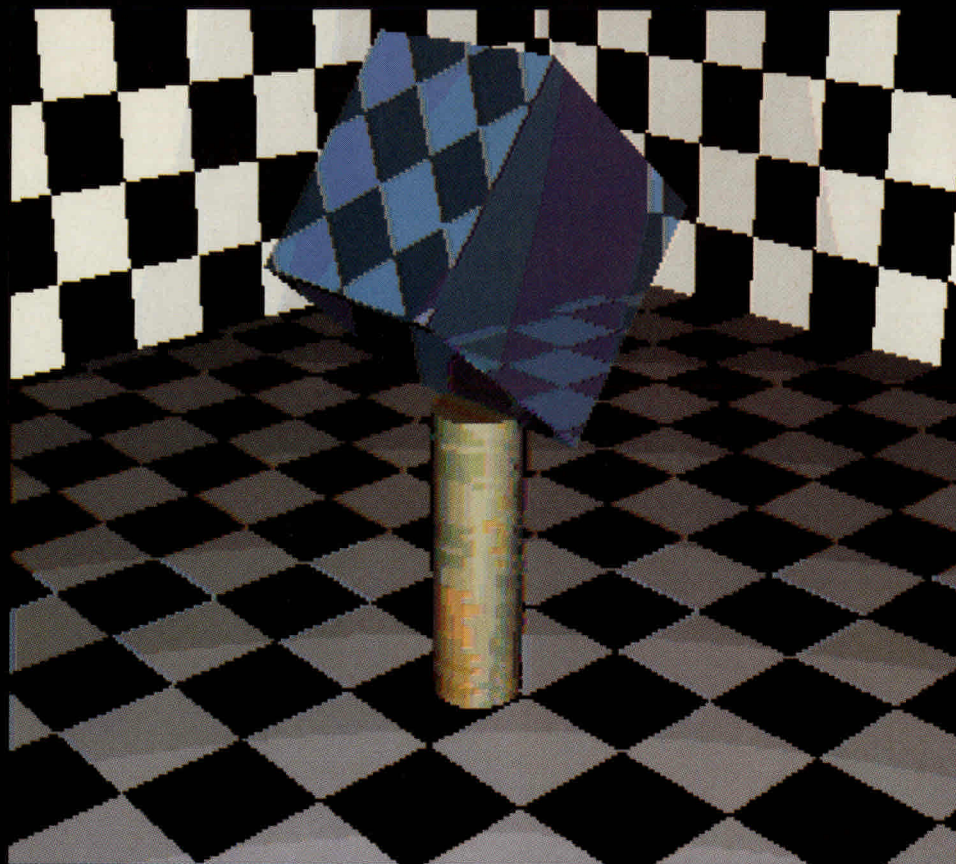
after you've drawn a few familiar shapes and examined them from all sides.

As Real3D is a surface based program rather than a points based one, you create objects by combining various 'primitives' such as cubes, spheres and cones. This might sound limiting, but you have an enormous number of commands to enable you to warp and change the primitives into practically any shape you need. If you can't manage to create exactly what you had in mind, you can combine the objects using boolean logic, which effectively means you can use one shape as a tool to shape another. By means of the logical hierarchical (tree-shaped) structured object system, creating complicated objects is simply a matter of combining several smaller stages. It's so addictive you soon find that you start examining every day objects (telephones, sandwiches, people) with a view to decomposing them into primitives.

From Primitives to Works of Art

Once you have finished playing with your collection of electronic lego bricks you can enter wireframe mode to fine-tune the position of the imaginary observer (where you are standing in this virtual world) and the aim-point (the direction in which you are looking). On-screen gadgets will spin and zoom your masterpiece, and when you are happy you can go the solid rendering stage.

The first time you render something, it will look pretty terrible. This is because none of the objects has any special characteristics - you are rendering pieces of dull grey metal floating in black space.



This is more like it! Chequered floors (obligatory in ray tracing), marble pillar and shiny cube makes it more interesting to say the least.

We need to get real!

Back to the editor screen, and selecting an object and then picking 'material' from a pull-down menu will open up a whole new world for you. Now you can choose exactly what your objects are made of: glass, plastic, wood, marble or even semi-transparent Pink Floyd album covers. If the material doesn't exist yet (which in the case of the album covers is quite likely) you can make your own. You'll need a bitmap - say, the digitised cover of Dark Side of the Moon - and then you specify various properties. Is it shiny? Is it transparent? Does it refract light like a lens? How does it cope with reflections? Is it smooth or bumpy?

And when everything has been given a fresh coat of translucent wood or pink foggy custard with highlights, you can go back to the solid rendering stage and create something which looks unnervingly real. Or even un-nervingly unreal.

Animate!

Animation is easy with Real3D. Instead of positioning the imaginary observer in one place, he/she can trace an orbit which you have drawn out in one of the views of the editor screen. The orbit isn't necessarily circular, and the computer will draw a smooth curve through all the points to help avoid any jerky motions in the finished animation. Then you specify how many frames you want animated and pop off on holiday for a fortnight.

Well, perhaps two weeks is a bit opti-

mistic, for you must remember that ray tracing is the most CPU intensive business yet though of. A complicated scene I created using many different materials took over six hours to render on my 3Mb A500. This means that if I'd tried to render the Gallery animation at home it would have taken over a month and three weeks to achieve. It's times like these you realise what wonderful things accelerator cards are.

What's new in 1.3?

The (currently) latest version of Real3D is 1.3, and it has several new features. By the way, upgrades between versions cost £30 plus VAT which includes an addition to the manual and all the disks.

Tools

- * Polygon tool (not just rectangles)
- * Polyhedron tool (create an object composed of polygons)
- * Conical Tube tool (ideal for modelling a human finger, apparently)
- * Smooth shape lathe

Materials

- * Multiple textures (change a texture

during an animation)

- * Turbidity (make your materials foggy!)
- * Specularity and Specular Brightness (control reflected highlights)
- * Smooth boundaries

Mapping Types

- * Clip mapping (use textures to cut objects)
- * Bump mapping (use textures to control heights on object's surface)
- * Special mapping (differing texture colours have different effects)

Animation

- * Direction control (automatically steers an object in an orbit)
- * Edit orbit (correct your mistakes)

Miscellaneous

- * Primitives available as on-screen gadgets
- * Twenty four bit renders (IFF24 and Targa)
- * Anti-aliasing (smooth the jaggies)
- * Sculpt converter (use your old Sculpt4D objects)

What's new in 1.4?

By the end of this month, version 1.4

should be available. The new and improved features will include:

Modelling tools

- * Four curve creation functions
- * Six free-form creation tools to produce point editable objects
- * Twenty four different bending functions
- * Control of curves including rotation, smoothing, closing, joining and subdividing
- * Phong shading
- * Point selection tools

Materials

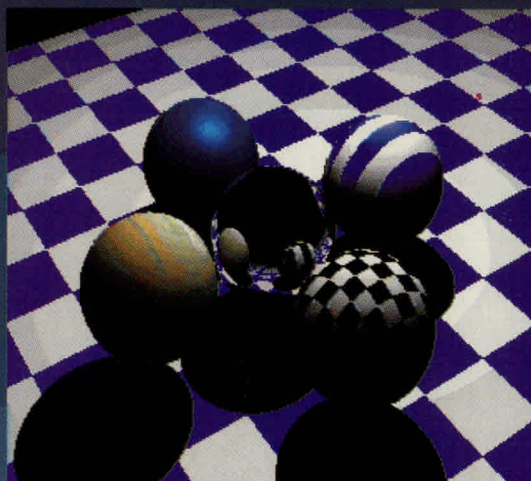
- * Horizontal and vertical texture tiling, allowing flipping and control of colour gradients
- * Adjustable horizontal angle in ball projections

Animations

- * Observer and aim point in object hierarchy
- * Better memory management in animation saving
- * More accurate control over motions of objects



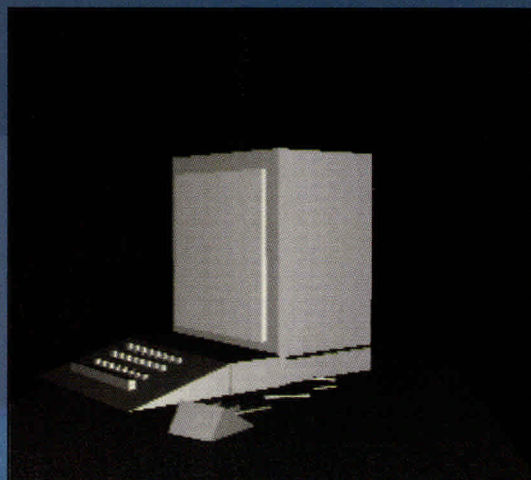
A whoppingly huge 24bit render, taken from the now infamous AUI Gallery animation. If you have more than 12Mb, you too can watch all 200 frames...



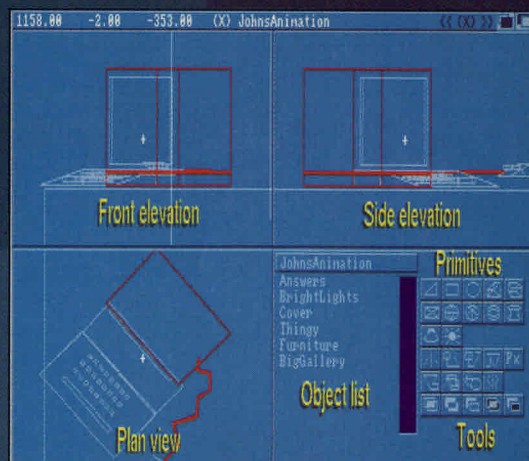
Normal mode adds shadows. It takes much longer, but it's worth it.



Balls. Shiny ones, plastic ones, mirrored ones and marbled ones. This was rendered in 'LAMPLESS' mode. Compare with the same image rendered in 'NORMAL' mode.



The greyscale mode is especially suited to rendering engineering drawings. So we rendered an Amiga. Artistic license...



The main editing screen. You'll see this one a lot, so thankfully garish colours are kept to a minimum. All the controls fall easily to hand.

"It's so addictive you soon find that you start examining every day objects (telephones, sandwiches, people) with a view to decomposing them into primitives."

TEST DRIVE

Real3D

C O N T I N U E D



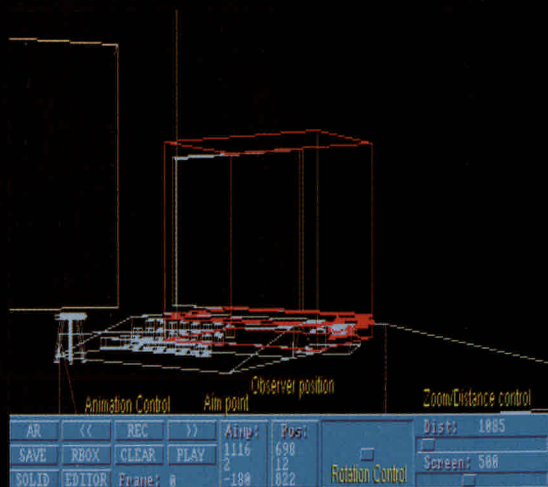
Miscellaneous

- * Undo function (at last!)
- * Enter co-ordinates by hand from keyboard for extra accuracy
- * More accurate control over locating objects
- * Visible grid
- * Clearer indication of highlighted objects
- * 25% better memory management during rendering
- * Three types of dithering
- * Image size up to 32000x32000

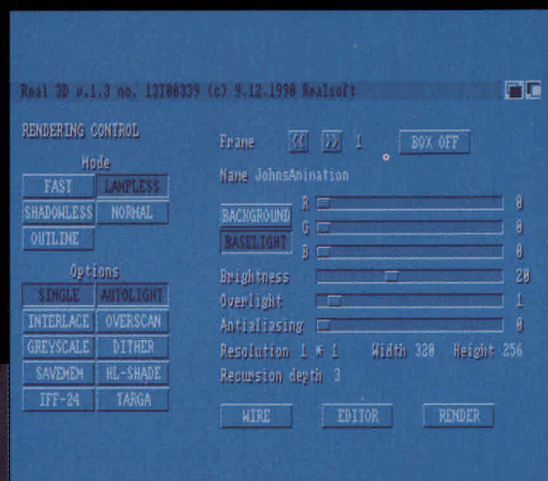
In the pipeline...

As 'bolt on goodies' for Real3D, extra disks of materials will be made available soon. If you are having problems choosing the specular brilliance of brick or defining the turbidity of blancmange, help is at hand! Also look out for some groovy 3D fonts which will open up the animated logo market.

Looking ahead, plans have already been drawn up for Real3D version 2. Version 2 will be a major re-write, and combine support for the surface type objects of 1.3 with the point orientated systems of Imagine/Turbo Silver. Many extra features will be added including improvements to the animation controls. Don't hold your breath though - version 2 won't be finished until late next year at the earliest. In the meantime you'd be wise to get hold of version 1.4 so that when 2.0 comes along you'll already be an expert. Real3D comes in several different versions to allow nearly everyone to choose between price and performance.



The wireframe preview mode is ideal for checking out views prior to solid rendering. Looks neat too.



The main rendering control panel. More options than something with lots of options.

"If you are having problems choosing the specular brilliance of brick or defining the turbidity of blancmange, help is at hand."

Beginners

Start here - or that's the idea anyway. For £142 you get a slightly reduced version that won't handle 24 bit colour and also lacks some of the macro and boolean facilities. It's still an amazing piece of software and well worth getting. As with all Ray Tracing programs memory is of prime importance, so try to have as much Ram connected to your system as possible.

Professional

Slightly more expensive at £409 the professional version does everything. If you are spending this amount of money though, you should really splash out on an accelerator and buy the Turbo.

Turbo

As the Professional, except only runs on a 68020,68030 or 68040. This is the version I used most, running it on an 68040. Believe me, I felt privileged!

Both the Professional and the Turbo versions can render images in 24bit colour. This means that instead of producing HAM display, the file produced contains over 16 million shades, and the results are amazing.

The only problem is viewing the things: it would appear that some extra (and

Graphical Jargon

Ray Trace

The principle of using the laws of physics to create a realistic image. Each pixel on the screen is traced back through the scene, bouncing off reflecting objects, getting tinted by coloured objects until the correct intensity and colour is calculated. There are a lot of sums to do!

Bump map

Sounds painful, but it's merely the use of a texture to add relief to an object. Ideal for adding an 'organic' feel.

Rendering

A fancy way of saying that the computer is drawing a 3D image.

Texture

The appearance of a material. For example, a desk may have a wooden texture and a polished floor a marble texture. Real3D can import any normal Amiga image and use it as a texture.

Material

Just as in real life, objects in Real3D are composed of materials. A material will effect how an object looks and interacts with others.

Wireframe

An 'outline' of a scene. Real3D can draw a wireframe representation of your scene in real time which makes previewing animations easy.

Macro

In Real3D terms, a macro is a repeated function such as a rotation applied to a cube. In each frame of an animation, the cube will rotate a little more, effectively spinning on its axis.

expensive) hardware such as the Harlequin board is the only answer. But wait, for Real3D has one more trick up its sleeve - the program Photo24.

Photo24 takes a 24bit file and displays it bit by bit in such a way so that a 35mm camera stuck in front of a standard monitor with its shutter locked open will record the image with its full range of colours. This was such an ingenious idea that I couldn't believe it until I tried it for myself. It worked! It took a lot of fiddling with the exposure times, but I did obtain a 24bit image on film without having access to a 24bit display board. Top marks for cunning to the Real3D programmers, and how about adding that feature to the Beginners version so that everyone can see it?

**All versions are available from
Alternative Image, 6 Lothair
Road, Aylestone, Leicester
LE2 7QB. Tel: 0533 440041**

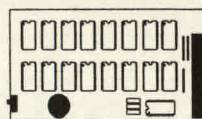
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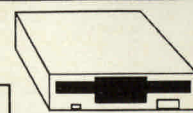
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 D010 Robocop 2 Slideshow
 D011 Naughty Cartoons
 D012 Robocop 15 seconds
 D013 Total Recall
 D014 Evil Dead
 D015 Alternative Neighbours (X)

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 M002 Debbie Gibson - Electric
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 M003 Madonna - Spanky
 M004 Petshop Boys - Always
 On My Mind
 M005 Jean M Jarre - Docklands
 M006 Music Invasion 2
 M007 Betty Boo d1
 M008 Betty Boo d2
 M009 Madonna - Vogue
 M010 Batdance Megamix
 M011 Madonna - Like A Virgin
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 M014 Queen - Flash d1
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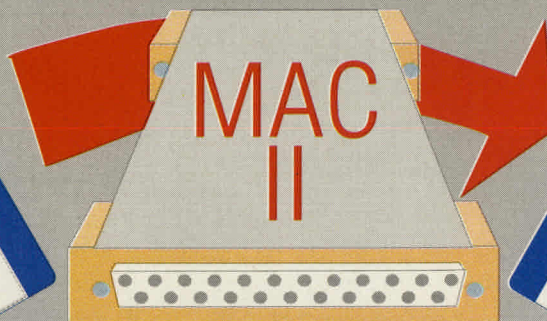
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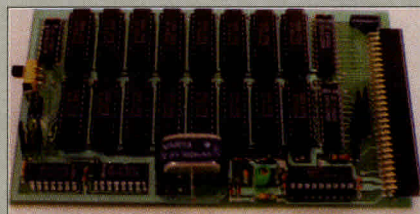
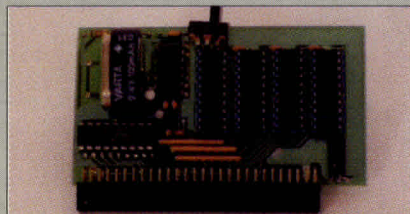
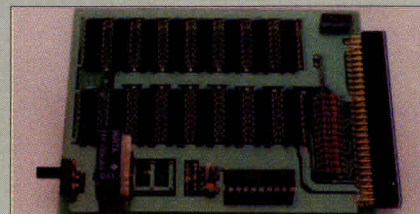
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Mastering C

Paul Overaa

Bruce Smith Books.

Mike Nelson reviews a new guide to "a superb language".

Paul Overaa has been writing articles on a variety of topics in *AUI* for several years now, and who better to write a book in the "Mastering" series? The book costs £19.95, and the chance to get all the source code with a PD compiler for a further £1.50. Good value before you even open it!

There are many guides to C on the market, but the Amiga is a unique creature in many aspects, principally be-

cause of its custom hardware and multi-tasking operating system. While Paul Overaa does not attempt to go into the intricacies of Exec and the hardware, the important points to bear in mind when programming the Amiga are emphasised.

The book is very thorough and Paul Overaa has gone to considerable lengths to keep up date with developments in the real world of C and the ANSI standards which are constantly evolving. The book takes a logical course through the subject, starting with explanations about how compilers do their stuff and how source is converted to object code prior to being linked to produce executable programs.

"C is a very powerful language as its commands are relatively low level because your access to data is virtually unlimited."

C is a very powerful language as its commands are relatively low level because your access to data is virtually unlimited. Herein lies the source (sic) of much confusion for newcomers to the world of C. Mastering Amiga C is written with such people in mind and extensive use of real examples (much more so than other similar texts) really minimises the culture shock from BASIC on a C64.

Style

Matters of style are also given quite a high priority, with an excellent chapter on program documentation and portability before more tricky topics such as arrays, pointers and data structures are covered in sufficient detail to get the points over, without getting the reader lost in obscure code or lengthy explanations.

Once the specific details about the C language are over, Paul Overaa includes some chapters on the actual process of writing programs, even to the point of describing sophisticated Warnier diagrams as flow charts. No programming book on the Amiga could be remotely complete without some mention of Intuition, the graphical user interface, and there are a couple of chapters relating to the fundamentals of this important subject.

After the comprehensive glossary, there are some appendices relating to the various C compilers on the Amiga market, and also the PD one included on the disk.

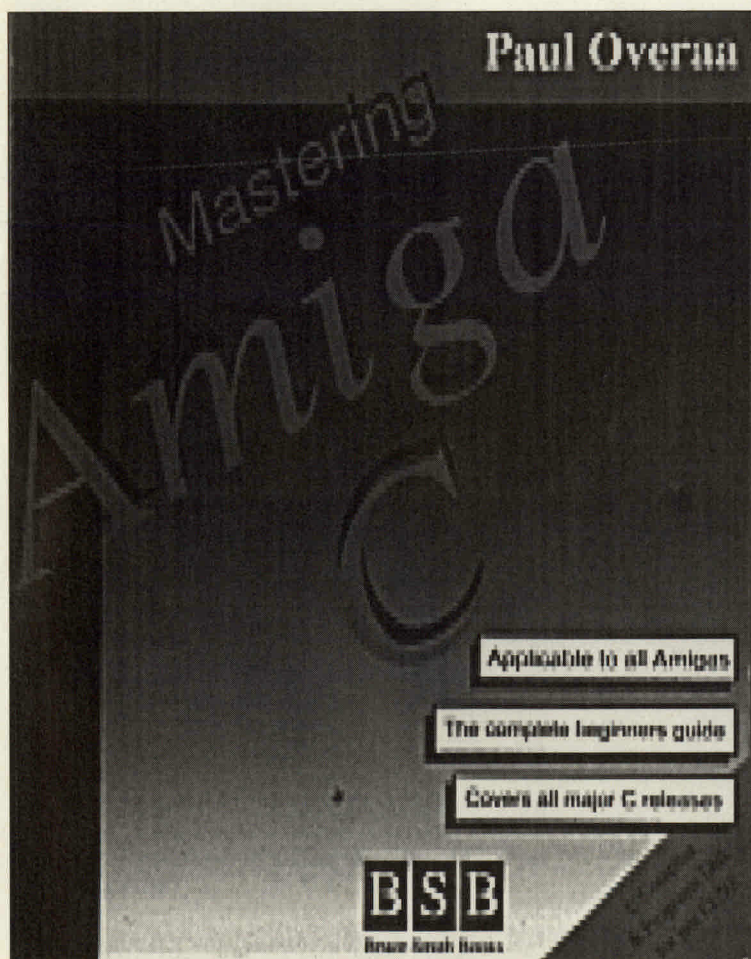
The "Mastering" series is turning out to provide top quality guidance for Amiga users, and those starting out in the world of C will benefit greatly from this book and its accompanying disk. If I had to make a criticism, it would be that it's five years too late for me!

To quote Paul Overaa himself:

"The Commodore Amiga is a superb machine and C a superb language. Together, all they ask is that you take some time to understand their inner workings. Do them this courtesy - they truly deserve it!"

This book will go a long way to help you master C on your Amiga.

**Mastering Amiga C, £19.95
Published by Bruce Smith Books.**



COMMS

Only connect. . . .

You may have noticed that one of the largest programs on the userdisk this month is a piece of terminal software. In case you wonder why, let John Kennedy explain how we're determined to get all **AUI** readers on-line!



Y up, we've given you one of the best pieces of comms software we can get our hands on, and in these pages you're going to find out how easy it is to get plugged into one of the fastest growing hobbies around.

Furthermore, **AUI** is in the process of setting up its own Bulletin Board system which you can use to leave messages and chat to the staff. Even better, we will shortly be making available more software than you could possibly imagine! Soon you'll be able to call up the **AUI** Bulletin Board and download hundreds of programs.

What is comms?

Comms (short for 'communications') is a way of talking to other users via computers using the standard public telephone network. Instead of using speech (like most sane people) comms users send electronic mail messages. There is nothing dodgy or illegal about it, and in normal use it's not to be confused with 'hacking'. Comms is a fantastic way to meet people with similar interests (and often different opinions), swap programs and keep abreast of what's happening all over the world. The Amiga is ideally suited for working with comms and there are thousands and thousands of Amiga owners already on-line.

What software do I need?

The only software you need is a 'comms package'. We have placed a shareware version of one of the best - JRComm - on the hyperdisk. You won't need anything else! See the Userdisk pages for details on getting JRComm up and running.

What hardware do I need?

You need an Amiga and television/monitor. You don't need extra memory. You don't need extra disk drives. You will need a device called MODEM, which allows the Amiga to be connected to the

telephone socket in your hall. A telephone extension cable would be useful.

Is it going to be expensive?

The MODEM is the only initial expense. After that how much you pay depends on how long and how often you are on-line. If you can restrict yourself from long daily sessions and try to keep to short, off-peak calls you will probably not notice the extra on your 'phone bill. It will only cost as much as you want it to.

Who do I call?

You call a Bulletin Board. A Bulletin Board system (BBS) is a computer system waiting for you to call. Most are run by non-professionals, purely for fun. The computer set-up usually consist of a system with extra memory and hard disk drives connected to a fast MODEM. They nearly always have messaging facilities and software available for uploading and downloading. Some have on-line games and adventures for you to play. Nearly all are free to join and use. Most people have a BBS only a local call away.

What is messaging?

Messaging (or email for 'electronic mail') is a way of instantly sending notes and letters using your MODEM. Typically a Bulletin Board will have a large database of messages. If you send an email message to your friend Joe Bloggs, it will be stored in this database until Joe Bloggs accesses the Bulletin Board himself. When he does he will be told that he has a message waiting. He can then read it and decide whether or not to reply. If he does reply, you'll be told when you next log on yourself. Most boards also have open access chat areas, where anyone can add their own thoughts on the topic of conversation.

What are uploads and downloads?

Want a piece of Public Domain soft-

ware in a hurry? Just get on to your local Bulletin Board and download it. Downloading is rather like loading a program off a floppy disk, except it's slower and the disk drive in question could be on the other side of the world. When you download a program it is stored on your system (in your Ram disk or on a floppy) and when you finish your session you can use the program as though you had just copied it from a separate disk. The program got onto the Bulletin Board because someone kindly decided to spend five minutes and upload it.

Archiving? What's that?

Archiving (usually pronounced 'ark-iving, PK please note) is a way of crunching a program to save space. If you have used previous **AUI** Hyperdisks, you will know we sometimes have to archive source code and programs to let us fit them all onto one disk. Most programs stored on a Bulletin Board have been archived, which means they take less space on the host system and less time (and therefore less money) to download.

A typical archiving program is LHARC. It is used from the CLI, like this:

```
LHARC m MyArchive My File
Crunch the file 'MyFile' and store it in an
archive called 'MyArchive'.
```

```
LHARC x MyArchive MyFile
```

Open the archive and remove (and expand) the file called 'MyFile'

Is that all there is to it?

Yes, that's all there is to it. You just connect your MODEM to the serial port at the back of your computer, and run the comms software. After that you use the Phonebook option in the software to dial the BBS of your choice, and after a few clicks and bleeps you get a message like this:

"Try to keep to short, off-peak calls you will probably not notice the extra on your 'phone bill."

WELCOME TO THE BULLETIN BOARD PLEASE ENTER YOUR PASSWORD (OR NEW IF YOU ARE A NEW USER)

If you are a new user, then you just do as it says. You will be asked to enter your name and details, and eventually you will be granted access to the board proper.

A bulletin board consists of several 'zones', which you move through by selecting options from menus. Everything is detailed on-screen, so don't worry about losing your way. All BBS systems have full on-line help, so all you have to do is type '?' or 'HELP' and you'll be told what's expected of you.

Perhaps the Sysop will break in and have a chat with you. Be nice to Sysops: they run the systems and have magic powers. Don't upset them.

So give me some Bulletin Board numbers!

Here's a short list. Each BBS you get on to will give you the number of ten more! By morning you'll know the number of every BBS in the world . . .

Aspects	061 792 0260
Yukon Ho!	0232 768163
Guru 10	0324 665862
Oddball	081 679 2583

What's it all mean?

Comms has more than its fair share of jargon. Here are some of the more common terms.

1. BAUD

A measurement of data transfer, in bits per second. A typical speed is 2400 baud, which works out at about 240 characters per second. Your computer must be operating at the same speed as the MODEM which must be operating at the same speed as the BBS system. Usually, this happens automatically.

2. BAUD RATE

The speed at which a MODEM can transfer data, usually measured in bits per second. Thus a 2400 baud modem can send data at about 240 characters a second. Obviously, the faster the better the more expensive.

3. BBS

Bulletin Board system – a host computer connected to a MODEM. Run by strange creatures, half human-half Amiga, who never sleep or go out, called Sysops.

4. CARRIER

When you connect your computer to another system, the two MODEMs involved need a common signal with which to communicate. A 'carrier' signal is generated which both accept and can modulate (change) to transfer data. The carrier detect (CD) light on most MODEMS

illuminates when this link has been made.

5. HOST SYSTEM

The host system is the one you connect your computer to. Effectively you have taken over control of the host computer and use it as though you were in the same room, typing away at its keyboard. In most cases though, you'll be within the confines of the BBS program.

6. LOG-IN

You log-in to a BBS when you enter your name and password. When you log-out you leave the BBS and 'drop the line' (disconnect the phone – usually this is automatic).

7. ON-LINE

When your computer is connected to a host system, it is on-line. When it's not, it's off-line. When it is covered in damp clothes it's a washing line.

8. SYSOP

Short for 'systems operator'. The Sysop is the mad fool, sorry, altruistic soul who lets his/her computer be used as the host for a BBS.

Comms protocol

When you are leaving messages on BBS systems, there are several things to remember:

1. Don't use block capitals. MESSAGES IN BLOCKAPOVISION ARE HARD TO READ AND MAKE YOU LOOK STUPID.
2. For emphasis, put a word inside *asterisks*.
3. Remember that the way something looks on screen may not be exactly what the sender meant, as it is hard to express emotions in short text messages. Think before you send a rude reply!
4. Use smilies. They help get meaning across, especially if you are only kidding about something. If you can't understand what they mean, turn the page ninety degrees.

:-) Standard happy smiley

:-(Standard unhappy smiley

:O Shocked smiley

;-) Winking smiley

(B-) Smiley with glasses and bald head

[\-) Robosmiley

:-] Forced grin smiley

:-Q Surprised smiley with cigarette

:-D Laughing smiley etc etc etc

Using JRComm

JRComm comes with its own (very) comprehensive user manual, which is contained in the file JRComm.LZH. When you un-archive JRComm as per instructions in the Userdisk pages, the manual (USERMANUAL) will be in the Ram disk.

You can read it by using the TYPE command at the CLI, thus:

TYPE ram:usermanual

If you have a printer connected, type:

COPY ram:usermanual to PRT:

and keep feeding the paper in!

The manual is good, but it won't do any harm to go over some of the more obvious points here.

Before you can get on-line, you must connect your MODEM to your Amiga. Always do this with the power to both switched off! Always use a lead which has been specifically designed for use with the Amiga!

Power the computer back up, and get your comms software running. If you followed the 8 point plan you will just need to insert your COMMS disk and double-click on the JR-Comm icon.

Once you have your comms software running, you can check to see if your MODEM is connected by typing AT and return. If all is well, you will see OK appear on the screen. The string 'AT' is an instruction which the MODEM understands, and its reply shows that it is awake.

If you haven't already done so, connect your MODEM to the telephone socket. This is where a telephone extension cable is useful, as without one you may have to relocate your computer into the hall.

From the pull-down menu called PHONEBOOK at the top of the screen, select the DIRECTORY option and a window will pop up. This window will eventually contain all your favourite phone numbers. At the moment you don't know any, so it's blank!

Hit the ADD button, and another little window will appear. From here you can add the details of the bulletin boards. Click in each box in turn to add the text that you see in the screen shot below. When you have finished, click in the close gadget in the top left of the screen. (N.B. This assumes your MODEM is capable of handling at least 2400 baud. If it isn't, you will need to select the SERIAL button and choose another speed).

Your phone list should now have an entry for the BBSs you want to use, so highlight it and then click on the DIAL button to start the magic.

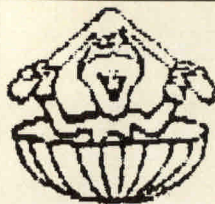
What to do if nothing happens

If something goes wrong, the software should tell you exactly what. For example, if the line is engaged it will say so. It will also attempt to redial the number several times, until either it gets through or you tell it to stop.

If a message concerning a lack of Dial tone appears, check the connection between the MODEM and the telephone wall socket.

See coming issues of **AUI** for some extra special news on comms and how, if you haven't already a modem, you can get one very cheaply.

"If something goes wrong, the software should tell you exactly what."

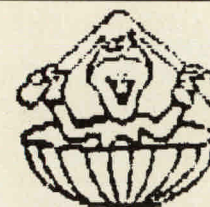


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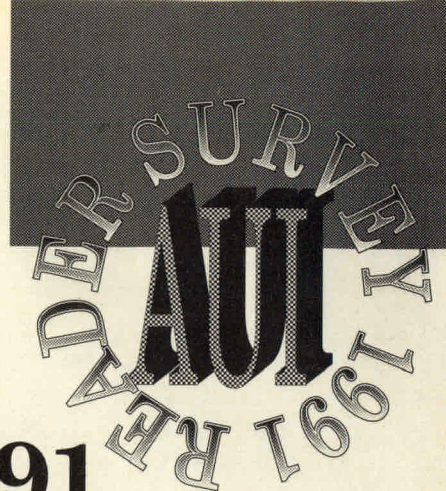
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We need information to help us give you the *AUI* you want. We would like to know something about you and your likes and dislikes in the magazine. We would be very grateful if you would help us by collaborating in a readers survey and telling us how you feel and what you want to see in *AUI*. If you want to be anonymous, leave off your name and address. Of course, photocopies would be just fine. Please help us! Thank you. All names will be put in a draw and the winner will be receive a Supra Modem or a copy of Deluxe Paint IV if preferred

SECTION I - Personal

1 - Where do you live?

- | | |
|---|---|
| 001 <input type="checkbox"/> Australia | 007 <input type="checkbox"/> Scandinavia |
| 002 <input type="checkbox"/> Canada | 008 <input type="checkbox"/> Spain |
| 003 <input type="checkbox"/> France | 009 <input type="checkbox"/> Switzerland |
| 004 <input type="checkbox"/> Germany | 010 <input type="checkbox"/> United Kingdom |
| 005 <input type="checkbox"/> Italy | 011 <input type="checkbox"/> USA |
| 006 <input type="checkbox"/> New Zealand | |
| 012 <input type="checkbox"/> Other (state)..... | |

2 - Sex

- | | |
|-----------------------------------|-------------------------------------|
| 013 <input type="checkbox"/> Male | 014 <input type="checkbox"/> Female |
|-----------------------------------|-------------------------------------|

3 - Age

- | | |
|---------------------------------------|--------------------------------------|
| 015 <input type="checkbox"/> Under 15 | 018 <input type="checkbox"/> 26-30 |
| 016 <input type="checkbox"/> 15-20 | 019 <input type="checkbox"/> 31-40 |
| 017 <input type="checkbox"/> 21-25 | 020 <input type="checkbox"/> Over 40 |

4 - Marital Status:

- | | |
|--------------------------------------|---------------------------------------|
| 021 <input type="checkbox"/> Single | 023 <input type="checkbox"/> Divorced |
| 022 <input type="checkbox"/> Married | |

5 - How would you describe yourself?

- | |
|---|
| 024 <input type="checkbox"/> An absolute beginner |
| 025 <input type="checkbox"/> Knowing a little about the Amiga |
| 026 <input type="checkbox"/> Knowing the Amiga very well |
| 027 <input type="checkbox"/> An expert |

6 - Which of the following best describes your profession?

- | | |
|---|--|
| 028 <input type="checkbox"/> Unemployed | 037 <input type="checkbox"/> M/facturing |
| 029 <input type="checkbox"/> Student | 038 <input type="checkbox"/> Computers |
| 030 <input type="checkbox"/> Teacher | 039 <input type="checkbox"/> Publishing |

- | | |
|---|--|
| 031 <input type="checkbox"/> Insurance | 040 <input type="checkbox"/> Engineering |
| 032 <input type="checkbox"/> Finance | 041 <input type="checkbox"/> Electronics |
| 033 <input type="checkbox"/> Public Servant | 042 <input type="checkbox"/> Sales |
| 034 <input type="checkbox"/> Medical | 043 <input type="checkbox"/> Legal |
| 035 <input type="checkbox"/> Military | 044 <input type="checkbox"/> Other |
| 036 <input type="checkbox"/> Arts/ | (state) |
| Entertainment..... | |

7 - How much do you earn?

- | |
|---|
| 045 <input type="checkbox"/> Under £5,000 per year |
| 046 <input type="checkbox"/> Under £10,000 per year |
| 047 <input type="checkbox"/> Under £15,000 per year |
| 048 <input type="checkbox"/> Under £20,000 per year |
| 049 <input type="checkbox"/> Over £20,000 per year |

SECTION II - Your Equipment

1 - Which of the following do you own or use?

- | | Own | Use |
|---------------------|------------------------------|------------------------------|
| Amiga 500 | 050 <input type="checkbox"/> | 051 <input type="checkbox"/> |
| Amiga 1000 | 052 <input type="checkbox"/> | 053 <input type="checkbox"/> |
| Amiga 1500 | 054 <input type="checkbox"/> | 055 <input type="checkbox"/> |
| Amiga 2000 | 056 <input type="checkbox"/> | 057 <input type="checkbox"/> |
| Amiga 3000 | 058 <input type="checkbox"/> | 059 <input type="checkbox"/> |
| Lo-Res Monitor | 060 <input type="checkbox"/> | 061 <input type="checkbox"/> |
| Hi-Res Monitor | 062 <input type="checkbox"/> | 063 <input type="checkbox"/> |
| Multi-Synch Monitor | 064 <input type="checkbox"/> | 065 <input type="checkbox"/> |
| Television | 066 <input type="checkbox"/> | 067 <input type="checkbox"/> |
| VCR | 068 <input type="checkbox"/> | 069 <input type="checkbox"/> |

2 - Do you have a memory expansion?

- | | |
|--|------------------------------------|
| 070 <input type="checkbox"/> 1/2 Meg | 074 <input type="checkbox"/> 2 Meg |
| 071 <input type="checkbox"/> 1 Meg | 075 <input type="checkbox"/> 4 Meg |
| 072 <input type="checkbox"/> 1 1/2 Meg | 076 <input type="checkbox"/> 8 Meg |
| 073 <input type="checkbox"/> No expansion RAM fitted | |

3 - How much, approximately do you intend to spend on hardware in the next twelve months?

- | | |
|--|--|
| 077 <input type="checkbox"/> Under £100 | 080 <input type="checkbox"/> £1,001-£3,000 |
| 078 <input type="checkbox"/> £1000-£500 | 081 <input type="checkbox"/> £3,001-£5,000 |
| 079 <input type="checkbox"/> £501-£1,000 | 082 <input type="checkbox"/> Over £5,000 |

4 - Which of the following do you already own, or intend to buy in the next twelve months?

- | | Own | Will Buy |
|------------------|------------------------------|------------------------------|
| Monitor | 083 <input type="checkbox"/> | 084 <input type="checkbox"/> |
| 31/2" disk drive | 085 <input type="checkbox"/> | 086 <input type="checkbox"/> |

- | | | |
|------------------|------------------------------|------------------------------|
| Hard disk drive | 087 <input type="checkbox"/> | 088 <input type="checkbox"/> |
| B&W printer | 089 <input type="checkbox"/> | 090 <input type="checkbox"/> |
| Colour printer | 091 <input type="checkbox"/> | 092 <input type="checkbox"/> |
| Laser printer | 093 <input type="checkbox"/> | 094 <input type="checkbox"/> |
| Inkjet printer | 095 <input type="checkbox"/> | 096 <input type="checkbox"/> |
| Plotter | 097 <input type="checkbox"/> | 098 <input type="checkbox"/> |
| Genlock | 099 <input type="checkbox"/> | 100 <input type="checkbox"/> |
| Graphics tablet | 101 <input type="checkbox"/> | 102 <input type="checkbox"/> |
| Scanner | 103 <input type="checkbox"/> | 104 <input type="checkbox"/> |
| Sound digitiser | 105 <input type="checkbox"/> | 106 <input type="checkbox"/> |
| Video digitiser | 107 <input type="checkbox"/> | 108 <input type="checkbox"/> |
| Bridgeboard | 109 <input type="checkbox"/> | 110 <input type="checkbox"/> |
| Modem | 111 <input type="checkbox"/> | 112 <input type="checkbox"/> |
| MIDI interface | 113 <input type="checkbox"/> | 114 <input type="checkbox"/> |
| Accelerator Card | 115 <input type="checkbox"/> | 116 <input type="checkbox"/> |
| Other (specify) | 117 <input type="checkbox"/> | 118 <input type="checkbox"/> |

5 - Where do you use your Amiga?

- | | | |
|--------------------------------------|--------------------------------------|-----------------------------------|
| 119 <input type="checkbox"/> At home | 120 <input type="checkbox"/> At work | 121 <input type="checkbox"/> Both |
|--------------------------------------|--------------------------------------|-----------------------------------|

6 - What is the main use of your Amiga?

- | | |
|--|---|
| 122 <input type="checkbox"/> Games | 127 <input type="checkbox"/> Graphics |
| 123 <input type="checkbox"/> Business | 128 <input type="checkbox"/> Music |
| 124 <input type="checkbox"/> DTP | 129 <input type="checkbox"/> Communications |
| 125 <input type="checkbox"/> W/P | 130 <input type="checkbox"/> Video |
| 126 <input type="checkbox"/> Programming | 131 <input type="checkbox"/> A mixture of all |

7 - Do you own or use any other computer(s)?

Please state which

8 - Which computers have you owned?

.....

SECTION III - Software

1 - Please indicate your level of interest for each of the following types of software:

- | | Not interested | Slightly interested | Interested | Very interested |
|-------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Games | 132 <input type="checkbox"/> | 133 <input type="checkbox"/> | 134 <input type="checkbox"/> | 135 <input type="checkbox"/> |
| Graphics | 136 <input type="checkbox"/> | 137 <input type="checkbox"/> | 138 <input type="checkbox"/> | 139 <input type="checkbox"/> |
| Music | 140 <input type="checkbox"/> | 141 <input type="checkbox"/> | 142 <input type="checkbox"/> | 143 <input type="checkbox"/> |
| Educational | 141 <input type="checkbox"/> | 142 <input type="checkbox"/> | 143 <input type="checkbox"/> | 144 <input type="checkbox"/> |
| DTP | 145 <input type="checkbox"/> | 146 <input type="checkbox"/> | 147 <input type="checkbox"/> | 148 <input type="checkbox"/> |
| W/P | 149 <input type="checkbox"/> | 151 <input type="checkbox"/> | 152 <input type="checkbox"/> | 153 <input type="checkbox"/> |

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Workbench Part 5

By now you should you should be a Workbench expert, says John Kennedy, adding, what he calls, "Another thrilling episode in the incredible but true Amiga story."

Twenty things you probably knew about Workbench

1. It takes ages for Workbench to load from floppy disk.

2. The current version of Workbench is 1.3, although the Amiga 3000 comes with the vastly updated Workbench 2. Rumour has it that Workbench 2 has finally been frozen and sent away to be placed on ROM (instead of on disk) which means it's just possible that it will be made available to everyone within the next year or so.

3. Albert Einstein never understood Workbench as well as you do.

4. Sometimes when you try to copy a disk by selecting 'Duplicate' from the Workbench pull-down menu, the screen flashes and nothing happens. This is because the disk you booted from does not contain the program DISKCOPY.

5. When you have redesigned your pointer and Workbench colours from the Preferences tools, you can copy the new settings to other disks. The file 'system-configuration' stores all these details and it lives in the DEVS drawer. You could copy it to a new disk called BRIAN by typing:
COPY DEVS:SYSTEM-
CONFIGURATION BRIAN:DEVS/

6. A disk will only auto-boot if it has been INSTALLED. You need to go to the CLI to INSTALL a disk. Open a CLI and type:
INSTALL ? (return)

Now put in the disk to install and type:
df0: (return)

7. Using Workbench is more fun than watching 'The Lisa Maxwell Show'.

8. The words 'Workbench' and 'Motor-

bike' are completely different. Furthermore, you can't do 110mph with Workbench, nor run Protext on a Kawasaki GT550.

9. You can speed up disk formatting several million times if the disk you are using has been formatted at least once already. Type into a CLI:

```
FORMAT DRIVE DF0: NAME
BRIAN QUICK
```

10. If you add NOICONS to the end there will be no Trashcan on the disk.

11. If you are running a program such as Deluxe Paint, you can still get to the Workbench screen to prepare or rename a disk. Simply press the right Amiga key and M or N to flip between screens. Some programs will shut down Workbench to save memory, but most have a menu option to re-open it.

12. You can ask Workbench to remember the positions of all your icons by using the SNAPSHOT option from the pull-down menu. First you must highlight all the icons by clicking ONCE on them with the left mouse button whilst holding down either SHIFT key. Then select SNAPSHOT, and their positions will be stored on the disk in a special file called '.info'.

13. You can define your own CLI commands by using the ALIAS instruction. For example, if you find typing ENDCLI too tedious, try:

```
ALIAS DIR ENDCLI
```

Now when you type 'bye' the CLI will close. Similarly, you may want to redefine DIR to be CAT, like this:

```
ALIAS CAT DIR
```

The commands you have ALIASed will apply to one CLI window only - the one in which you typed them. Once you close that CLI, they will be forgotten. To make them more permanent, add them to the shell startup

file. Use ED to edit the file by typing:
ED s/shell-startup

and add your own commands to the end of the list. Now every SHELL you open will use the new commands.

14. The Workbench is a backdrop screen, 640 pixels wide by 256 pixels high (PAL) and is two bitplanes deep, providing four colours (black, blue, white and orange). The pointer is actually a four colour hardware sprite.

15. Several screens can exist in memory at once, each with its own resolution and colour information. You can drag the front one down by holding down the left mouse button whilst the pointer is over the drag bar, then sliding the mouse down. If you leave it half way up the screen and place the pointer over the border, you will see that it has a black line across it. This is caused by the video chip (the copper) having to reset all its registers to prepare for the new screen, and not being to display the pointer sprite at the same time.

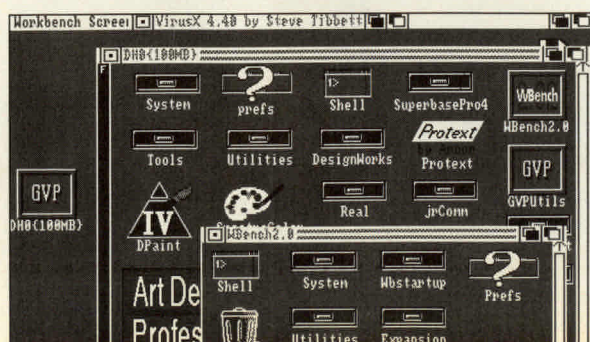
16. Atari ST owners complain that the Workbench is too difficult to use. Have you ever used an Atari ST? Yuck!

17. To pause a screen of text scrolling past on the CLI, press the space bar. Restart the text by pressing the back space (<) key.

18. Workbench is the only operating system to provide true multitasking (not just process switching) on any micro-computer that I've ever used.

19. Paul Robinson uses Workbench (on a single drive Amiga) to run the entire Robinson Corporation. He has only had one problem, when his assistant used a disk infected with a virus. A man with a pony tail and glasses fixed it.

20. Workbench is so user-affectionate that there aren't really 20 things about it to know (unless you can tell us what I've forgotten. Bet you Bud Vennos would love to read and publish any - or your own Workbench Top 20!).



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P002) A68K ASSEMBLER.
P004) NORTH C. PD version of C.
U026) AMIBASE. Simple database.
U089) FLEXI-BASE. Very flexible.
U092) DEIUXE PAINT FONTS DISK.
U096) STUDIO RIPPERS. Rips sound.
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U079) NOISETRACKER. Brilliant.
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SOUNDTRACKER/NOISETRACKER SAMPLES

ST-00, ST-01, ST-02, ST-03, ST-04,
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ST-26, ST-27, ST-88, ST-92, ST-95

DEMOS

D031) BUDBRAIN 2. Brilliant demo.
D090) JOE 2 SLIDESHOW. Nice pics.
D125) IMPACT VECTOR BALLS
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D219) PIRANAHS DEMO. Original.
D232) EQUAMANIA 2.
D072) KICK OFF 3 PREVIEW.
D119) THE LINK MEGA-DEMO.
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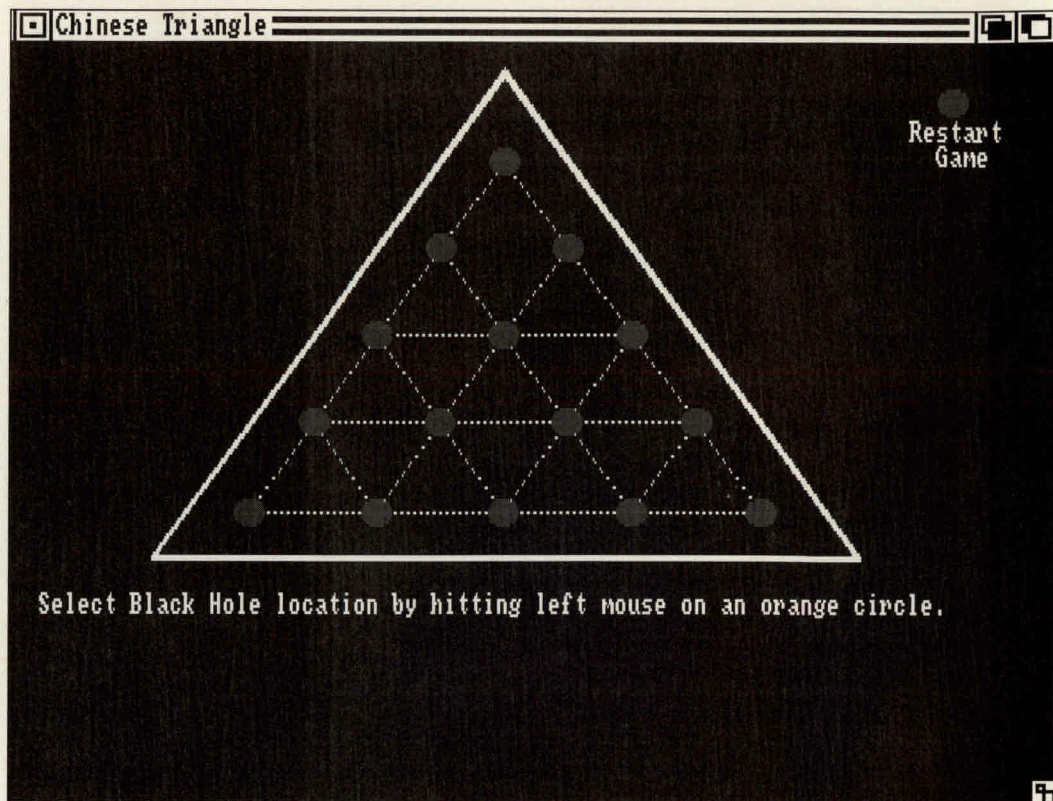
Stocks subject to availability



USER PORT



Norman Stone casts his line into the Fish pond again and hooks out a few whoppers for your delectation.



FRED FISH

Paddling in the Fish Pool

Fish 468:

Post:- A postscript interpreter for the Amiga which implements the full Adobe language, update to disk 446. **VLT:-** A partial update to disk 455, includes new executables with and without Tektronix emulation.

Fish 469:

Airrace:- A fast paced WW1 biplane shoot'em up game built using Palace's Shoot 'em Up Construction Kit. This is a damn hard game to beat, not as easy as it looks and if this is an example of the games that can be made with Palace's Kit then I hope we see some more in the PD library. **Fastlife:-** A fast life program featuring an intuition interface. And it is fast!!". **Triangle:-** A game like chinese checkers, consisting of fourteen pegs and one empty hole in a triangular formation the object of the game is to leave one peg in the original empty hole (This game is claimed originally to have started in France, invented by a French nobleman in prison

"The object of the game is to leave one peg in the original empty hole"

in 1700). **Wordpuzzle:-** The object of this game is to find a word in a puzzle. Down the side of the puzzle are all the words to be found. The words are placed horizontally, vertically or even reading back to front within the puzzle. The puzzle consists of lots of boxes with the letters of the words in them, and you have to find the first letter of the word you are looking for and then the second letter until you complete the word. (You have probably seen this type of game in puzzle magazines).

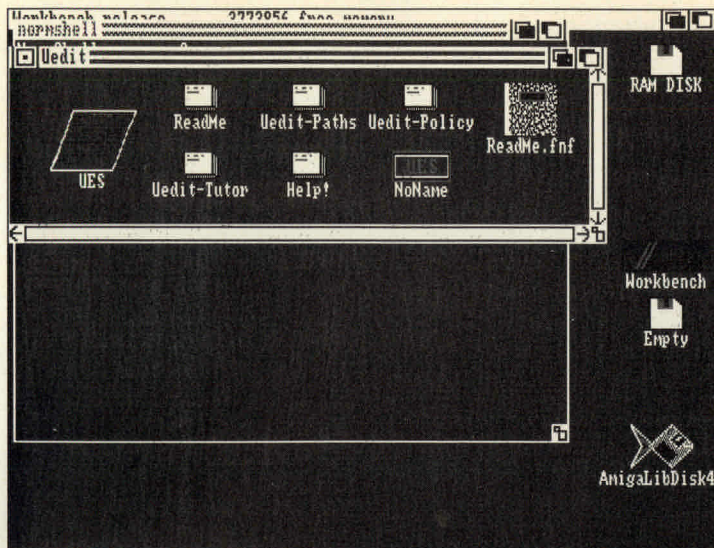
Fish 470:

Bcf:- Fortran-77 compiler, linker and runtime library. No Amiga specific hooks just vanilla FORTRAN. **Keymenu:-** An alternative to Intuition's method of menu selection via the keyboard. This uses one key to activate the menu for the currently active window, the cursor keys move through the menu as you choose and the return key selects. **Tripleyachtz:-** An implementation and variation of the game YACHT plays

both single (standard game) and triple which differs from normal yacht game in that the score in the 2nd column is worth double the normal score and the third column is triple the normal score. There are also some digitised sound effects and interlace is used (It is better with a flicker fixer).

Fish 471:

Btntape:- A better than nothing SCSI tape device handler. **MachIII:-** A mouse Accelerator program that includes hotkeys, click to front, popcli, title bar clock, update to disk 378. **Molewt:-** Molewt is a molecular weight calculator. This program accepts a chemical formula and returns the weight. A small rectangular box comes up on the screen with enough room to enter the formulae and obtain the result, no fancy extras but a program that does the job it was designed to do. **Uedit:-** A nice shareware editor with a learn mode hypertext etc. A fast mouse scroll -you can control the speed with the mouse, but it is NTSC.



"This is Part one of a C news distribution for the Amiga. This part includes the binary and text files needed to set up and run C news."

Fish 472:

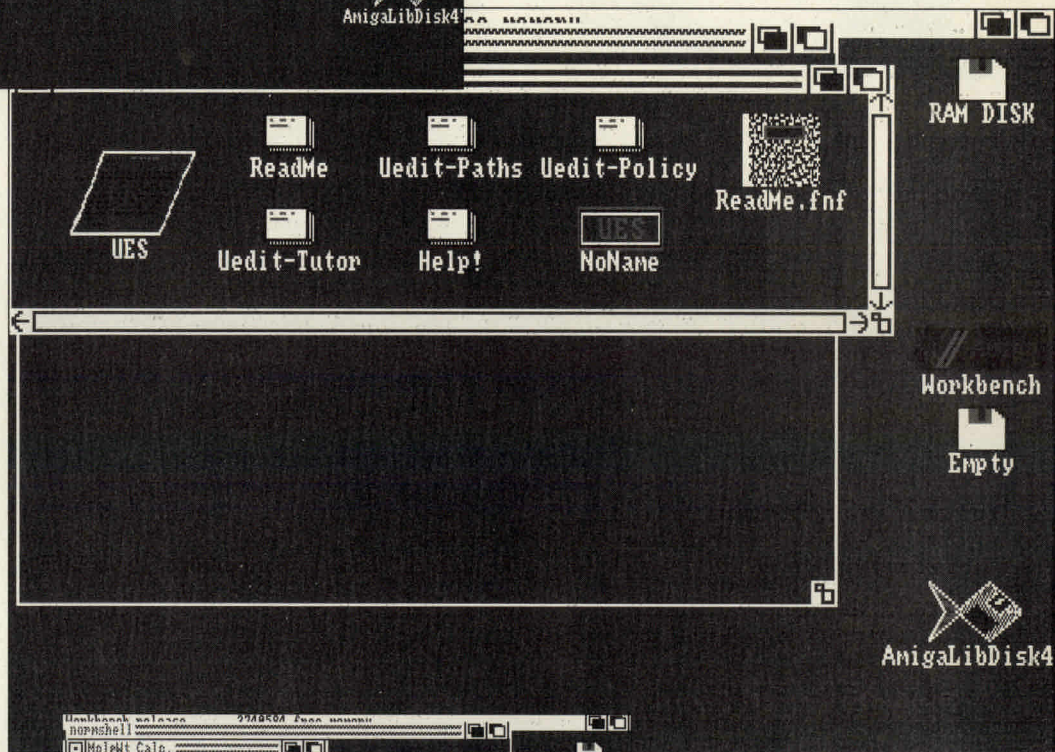
Cnewsbin:- This is Part one of a C news distribution for the Amiga. This part includes the binary and text files needed to set up and run C news. Update to disks 318, 319. **Icalc:-** An expression calculator that works with real and complex numbers. **IffBeep:-** A small utility that lets you replace the screen flash with any Iff 8svx sound file.

Fish 473:

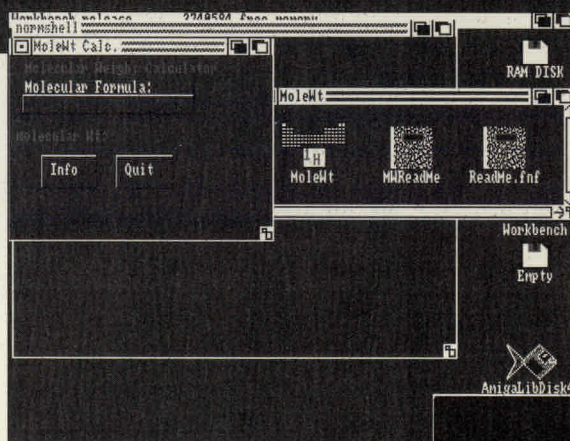
Bigbrother:- A virus infection detection program, it runs as a normal task and checks every one second the important memory locations. You will need arp.library to run it though. **CnewsSrc:-** This is Part 2 of C news on disk 472. **Family Sol:-** A standard game of solitaire with options for up to four players, which makes a nice change, another good inclusion is that if you have one of the four aces out and you click on a two in the same suit, it is automatically placed for you. It also gives you a score total and a card total, one of the best solitaire games I have seen. **Missilecmd:-** A fast missile Command game, features a hires interlaced screen update to disk 444.

Fish 474:

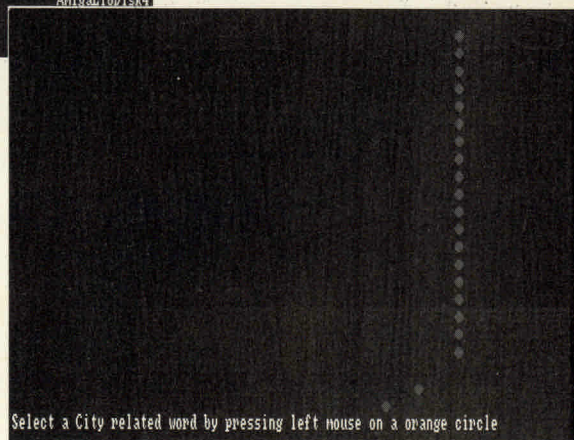
Aequipot:- A program that renders multicolour pictures using an algorithm based on electrostatic effects (I get that when I put my hand on the screen!!). **Amidock:-** This is a version of NEXT'S dock facility, it will open up a small window on your workbench full of small IFF brushes, each brush represents an application like an icon but it is a brush; click on the brush and your application will start. **Crclists:-** Complete CRC check files for disks 401-470 using the briq program. **Enforcer:-** Detects/protects against illegal memory hits, compatible with all OS versions and machines (requires a memory management unit or 68030 processor) This will help you smother those unknown bugs that disrupt your program. **Greekfont:-** A 12 point font with Greek letters. **Imperium:-** Strategic BISK style game for up to four players based on ancient Rome, Athens, Alexandria and Carthage.



"This will help you smother those unknown bugs that disrupt your program."



Well, that is it for this month until we bait our hook up and haul in some more big ones for you from the Fish pool next month.



Disk

We all need disks for our computers, but are you getting the best value from them? Gary Fenton shows you how to find out. Walk disk way...

How often have you thrown a disk out because of a recurring read/write error? The fact is, like most things in life, you get what you pay for and that applies to disks as well. If you regularly stick to a branded name such as TDK or Sony, then the chances are that you never have had to discard a disk. (Oops, I punned again.)

Branded disks are well tested as they pass through production. Sony and TDK reject all branded and unbranded disks that fail to meet their high standards. However, not all disk manufacturers have such high standards on unbranded media. Why should they if unbranded disks are on average one third of the price, and intensive disk testing wastes time and resources?

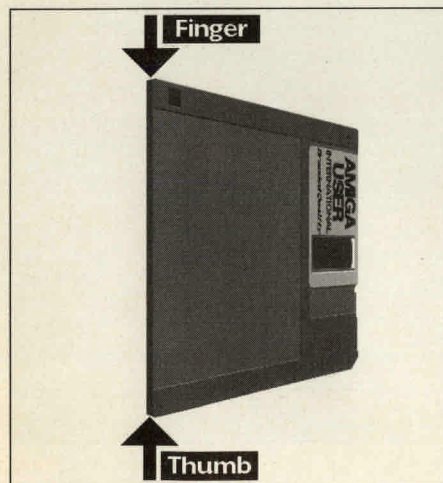
Retail and mail order companies often advertise low price disks. The majority of these unbranded products are great

value since some are equally reliable as their branded counterpart. However, some are sad examples of "reliable" media. Wouldn't it nice if there was some way of telling the difference from a good disk and a not so good disk. Well, according to major manufacturers there isn't. But, according to some of the larger disk retailers there is. Okay, there are no hard and fast rules for discriminating(!) one from another, but the following tests I have found to work 95 percent of the time.

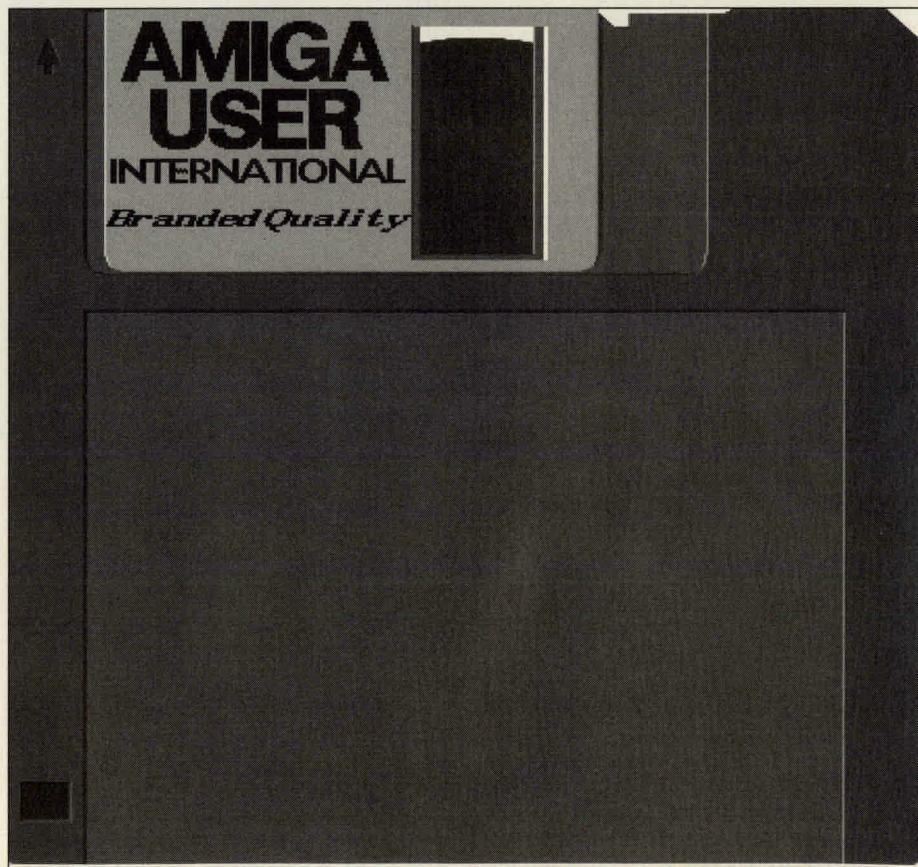
Step one. Take the disk you want to test (make sure you don't need it any more and it has no disk label) and hold it in one hand between your thumb and index finger as shown in the diagram.

Hold it tightly as you use your other hand to bow the disk back and forth. If the disk splits at the join, then it's obviously not stuck together properly.

Step two. Look on the reverse side of the disk. It is not too important if it says where the disk is made, but it is more assuring if it has a PIN number printed on it. This information can hold the date of manufacture, where exactly it was made and by which company. You can't read this for yourself but the company concerned can. Both TDK and Sony print the PIN on branded and unbranded products. The obvious assumption here is that if it has no PIN number or any other markings, then you can't trace it back to the company that made it. Surely



Hold it like so, without seducing it.



It's hardly biology, but this one has been dissected.

Over every

that tells you something about having faith in your product.

Step three. Try to pull the disk shutter off. If it comes off with little effort then you have broken it. Now move on to the next step.

Step four. If you haven't accomplished step three then slide the shutter back so you can clearly see the disk media inside. Looking at the section nearest to the centre of the disk, hold it up to the light and see if there is a change of shade as shown in the corresponding diagram. The burnished area has been "smoothed" for use and the unburnished area is all "rough". If there are no more than four millimetres of the darker area visible, or none at all, then the disk has

been made to a higher than necessary standard. There are 135 tracks on the disk, but the computer only uses 80 of them, so the rest of the tracks aren't even touched.

Step five. The best bit. Rip the disk open without splitting the case too badly. If the white liner inside looks patterned then it is probably non-woven. This makes for a softer ride for the disk media.

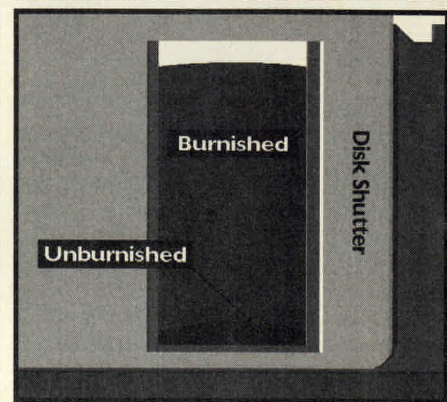
Step six. Pull the liner off until you can clearly see a piece of plastic or metal that sticks up. This is the lifter which controls the torque as the disk spins. It also helps the liner to keep the media clean. If the lifter is a plastic tab then costs have been cut in production. The best lifter is a shaped metal one.

Step seven. Throw the disk away because you have broken it.

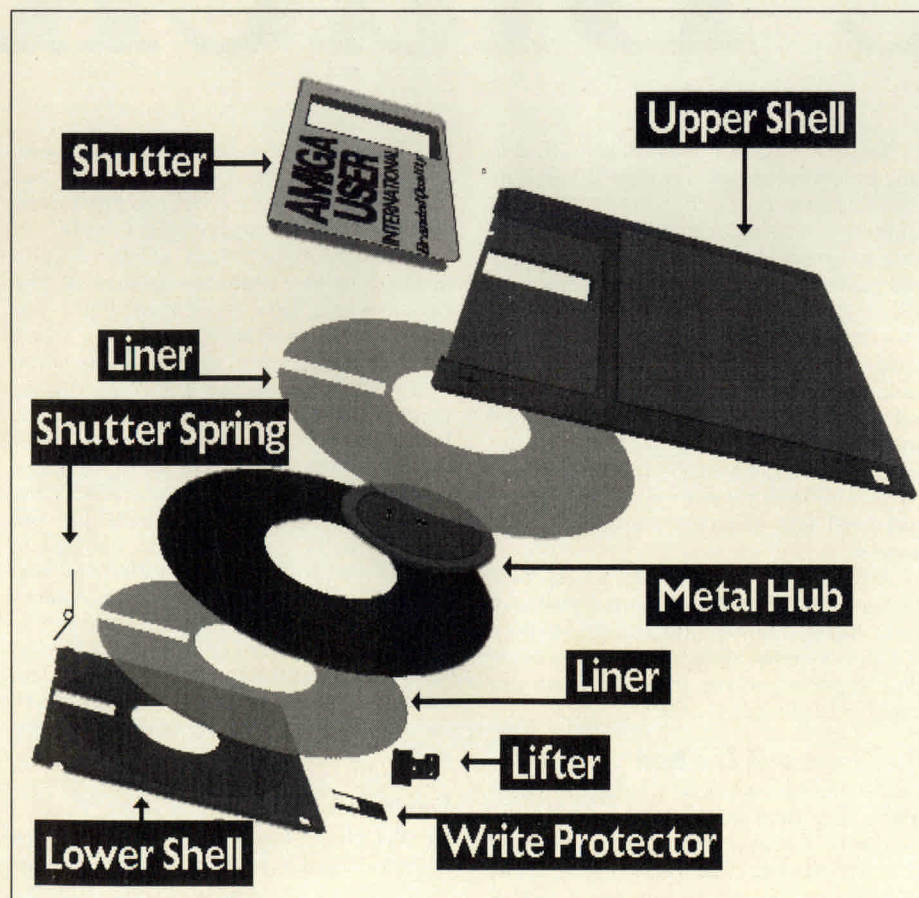
Please don't judge all disks by these tests. The only real test is time itself. As with all magnetic based tapes and disks, over a period of time the magnetic charge will diminish along with the information stored. A good disk can store information longer than a bad one. This is measured by the clipping level as a percentage. As a guide line, don't buy disks with a clipping level lower than 45%.

"Floppy Facts"

1. Sony invented the 3 1/2" disk.
2. The Amiga spins a disk at around 300rpm
3. In theory, the Amiga should read disk data at 30K per second.
4. The gamma ferric oxide coating on a disk is 1.9 microns thick.
5. The magnetic media in total is 80 microns thick.
6. This year's estimated 3 1/2" disk sales, worldwide, is 1300 million.
7. Last year Britain used 30 million 3 1/2" disks.
8. Last year, an estimated half a million man hours were spent formatting 3 1/2" disks in this country alone.
9. Some unbranded disks are required to be higher in quality than branded disks for some types of important mass software duplication. (eg Lotus 123)
10. It was only last year when sales of 3 1/2" disks over took sales of the dated 5 1/4" disks.



This test is very unofficial, but hey, it works for me.



USER PORT

How to recapture the good old days, whilst saving yourself time and making your programs more legible in the process. . . And all because the lady loves black box programming, enthuses the stiffly structured John Kennedy.

For a start, it has been said that C programming is too expensive. Of course, most things can be expensive, but not all have to be. If the rather steep price tag of the SAS/Lattice C system doesn't do anything for you, then you should try and unearth the excellent DICE C system from Matt Dillon, which is available for about the same price (if not less) than a compiled BASIC system.

The second worry is the fear of C's complexity. This irrational phobia can be easily dispersed by buying a decent book (or failing that, one by Mike Nelson!) or waiting for your favourite Amiga magazine to run a tutorial series. In fact, pushing through the anoraks to get to my local bookshop's computer section provided the interesting statistic that there were ten times as many books on C as there were books on BASIC. From the book authors' point of view at least, BASIC is dead and C is where the money is.

the program: all you need do is hunt through the source code until you get to the bit which needs changing. The disadvantage of such a method is that it takes absolutely ages to compile the program every time a small change is made. Clearly with a really complicated program, this method is simply unworkable as you spend more time twiddling your thumbs waiting for the program to compile than you do actually writing and debugging code.

The second method involves making use of C's 'linking' facilities. Instead of having all the code in one huge file, you split it into several independent files, for example: putting all the code for the graphics into one file and all the code for the sound effects into another. Each file is then independently compiled, and only at the last moment linked together to form a final program. This saves a tremendous amount of time, because only

The Secret of the Black

"Instead of being a complicated men-in-lab-coats type experience, you may find that you could actually get to like C."

After using the Amiga for about three years, I find that there's a lot that can be said in favour of the old 8 bit micros. After all, you just switch them on and immediately you have BASIC waiting for you. All you have to do type in PRINT or a PLOT and you get instant results on the screen in front of you.

It's the sort of programming intimacy that is missing from an Amiga, which is - let's face it - more a user-orientated than a programmer-orientated machine.

Furthermore, one of the spin-offs from having the power of a 68000 and custom chip set is that BASIC is no longer the best language for the job - you'll know exactly what I mean if you try to use the version of AmigaBASIC bundled with the machine. To make the most of the computing resources available, a language which can cope with the multi-tasking, data structure and library based system is needed, and C seems to have filled this gap.

There are several disadvantages to using C, and although most of them are perceived rather than actual, they are enough to put off more people than they should.

You still need to bear in mind that C can be complicated. So can BASIC, or PASCAL or even English for that matter. However, when it comes to the crunch your programs are only as complicated as you make them. C has an inherent capability for goobledook by allowing a shorthand format, so if you try really hard you can write a program which looks like complete garbage. This can lead to a form of 'C Programmers Only' snobbery, but don't let it get to you. At the end of the day, when the programs have been compiled, no one will ever know if you used lots of pansy comment statements.

Any other problems? No? Good, now we can look at how the various features of C can be used to your advantage. Instead of being a complicated men-in-lab-coats type experience, you may find that you could actually get to like C.

The Good and The Bad

There are two ways of writing a C program. The first way is to lump all your code into a single file of functions and data structures. With such a file, it's a relatively easy task to change any part of

the fragment of code which has been changed needs be re-compiled - if you change the graphics code, you don't need to re-compile the sound effects code.

A useful by-product of the second method is the reusable nature of the routines you have developed. Once you have worked something out, you won't need to re-discover, design, streamline and mass-produce the circular rotating transport device for each program. This leads naturally to a 'black-box' design of programming, in which code modules contain all their own data and functions, and life is made much easier for the programmer. The black-box method is such a good idea, that in the big bad world of systems programming, American programmers (who prefer to do everything themselves) are in serious threat of being completely blown out of the market by the Japanese programmers (who share everything from the word go).

Fractals again?

In this short series of articles, we are going to develop two programming modules and one finished program. Once we

have finished and compiled these modules, you can use the functions they provide in any of your future programs, saving lots of time and effort. The really great news is that you won't even need to understand how the modules work if you don't want to: all you need to know is what they do and how to use them. All the code was written and tested on a 1Mb Amiga 500 using SAS/Lattice v5. A hard disk was also used to speed up the development cycle and retain any sanity I had left. Gobble.

The first module is called 'graphics-module' and it provides us with some simple graphics functions, such as point plotting and line drawing. Most programs which need to draw lines also need to open an Intuition Screen to draw them in, so this module will automatically do that for you as well. No need to muck around with trying to suss out Intuition - everything is reduced to simple function calls. To give you

f Box

a flavour of what we'll end up with, here is an example program which will draw a line on the screen using the functions declared in the module:

```
#include "graphics-module.h" /* The
'header' file (see later) */

main()
{
    gfx
    gfx_on(1); /* Open the screen */
    gfx_move(100,10); /* Move the graphics
cursor */
    gfx_drawline(10,100); /* Draw a line
*/
    gfx_off(); /* Shut everything down */
}
```

The code that provides all the graphics functions is safely hidden away out of sight. Not a RastPort structure in sight! This sort of programming makes knocking together a quick graphics experiment almost as easy as it used to be with the old 8 bit micros. Hurrah! Bring back tape loading systems...

The second module uses the graphics capabilities to provide us with some 'turtle graphics' type routines. Apart from

the obvious temptation to write a LOGO language interpreter, the turtle graphics routines make several programming problems a lot simpler to code.

And such a program will be our piece of resistance: a program to draw fractal curves. By making use of functions defined in the previous two modules, the final program is incredibly short and not at all Amiga-dependent. This is the way that all programs should be written!

Module 1 - graphics-module

Listing 1.1 is the 'header file' of the graphics module. Any program which uses the graphics module should include this file (using the #include pre-processor command) so that the function names and parameters aren't a complete mystery to the compiler. In other words, the header file is a list of prototypes. If you want to add any of your own features to the graphics module (for example, a box filling routine) make sure to place an entry in the header file.

N.B. There is no need to compile or link the header file - it's just a plain text file which will be incorporated into any program using the graphics functions.

Listing 1.2 is the one that does all the hard work. The most important thing it does is to open a custom screen (that is, a screen independent of the Workbench, created to our own colour and resolution

"You can still crash the system by trying to do something out of the ordinary, so if you are a crashy-type of person you should add your own anti-gronk code"

specifications).

The routine `gfx_on()` *must* be called before any other, because it sets up the screen and so defines where all the lines and points are to be drawn. If you call `gfx_plot` before `gfx_on`, the Graphics Kernal will plot a point somewhere in some unsuspecting memory and you'll be in trouble. When you have finished, you *must* call `gfx_off()` to shut everything down. If you don't, the graphics screen will remain in memory. Although this won't crash the system, you won't be able to use the memory it occupies until you reset the system. Remember: start with `gfx_on()` and finish with `gfx_off()`. That's the hardest bit.

Error checking in the code is minimal, but only to save space - not because it isn't needed! You can still crash the system by trying to do something out of the ordinary, so if you are a crashy-type of person you should add your own anti-gronk code as a matter of course. I'm too lazy to do it myself, but then again, I have paid the price many times over.

The function `Gfx_on()` requires a value to be passed to it, in order to define the 'depth' of the screen. The depth deter-

mines how many colours can be used, like this:

Depth	No. of Colours
1	2
2	4
3	8
4	16
5	32

You are 'only' allowed thirty two colours, because HAM and Extra Half Bright modes are not supported in this series.

The easiest way to think of the colours is in terms of 'pens' which your points and lines are drawn in. Each pen can have any colour of ink in it you like, but you are only allowed a fixed number of different pens. All drawings made by a specific pen remain linked to that pen, so if you later re-define the colour of the pen, the drawing changes colour too.

Once you have decided on the number of pens to use, you'll need to define the ink colours in terms of their Red, Green and Blue components using the function `gfx_setink(pen number, red, green, blue)`.

Here are a few examples (note that the screen's background is pen 0).

```
gfx_setink(0,0,0,0) Make background
black
gfx_setink(0,15,15,15) Make back-
ground white
gfx_setink(0,15,0,0) Make back-
ground red
gfx_setink(1,0,0,15) Make pen 1 blue
gfx_setink(2,10,10,10) make pen 2
grey
```

The values for the Red, Green and Blue components can range from 0 to 15, which allows $16 \times 16 \times 16 = 4096$ different shades. Remember that you can change these colour definitions at any time - even if you have drawn something already. For example, if you have defined ink 1 to be blue and drawn a box with it, if you then re-define ink 1 to be red the box will immediately change colour.

You can choose the pen to make your drawings in by calling the function `gfx_setpen(pen number)`.

The remaining functions deal with moving, plotting and drawing points and lines and should be self-explanatory. Remember that as we are using a low resolution, non-interlaced display, the screen co-ordinates range from 0-319 horizontally and 0-255 vertically.

Using the module

When you have the module on your system (copy it over from the Hyperdisk), it must be compiled (but not linked yet!). Using Lattice C, the necessary command from the CLI is:

```
lc graphics-module.c
```

"C has an inherent capability for goobledook by allowing a short-hand format, so if you try really hard you can write a program which looks like complete garbage."

USER PORT

Now you are ready to try a small test program, such as listing 1.3. This program will open a screen and draw some pretty multicoloured lines before waiting for you to press a key. When you have typed it in, compile it like this:

```
lc testprogram.c
```

And then link it with the graphics module by typing:

```
BLINK FROM
LIB:c.o+"testprogram.o"
TO "testprogram"
LIB LIB:lc.lib LIB:amiga.lib graph-
ics-module.o
BATCH
```

If all goes well, you'll be able to run it by typing:

```
testprogram
```

and you'll see something which usually requires an illegal state of mind.

"This sort of programming makes knocking together a quick graphics experiment almost as easy as it used to be with the old 8 bit micros."

Next month

In the next exciting instalment, how to use the module to write a turtle-graphics system! LOGO anyone?

Listing 1.1 - The graphics module header file

```
/*
** The Graphics Module header
file
*/

extern void gfx_on();
extern void gfx_off();
extern void gfx_move();
extern void gfx_draw();
extern void gfx_plot();
extern void gfx_point();
extern void gfx_circle();
extern void gfx_ellipse();
extern void gfx_cls();
extern void gfx_setpen();
extern void gfx_setink();
```

Listing 1.3 - The test program

```
/*
** Pretty graphics test program T.R.
*/

#include "graphics-module.h"
```

```
#include "exec/types.h"
```

```
void circles(),flash();
```

```
main()
{
    gfx_on(5);
    circles(110,128);circles(210,128);
    circles(160,78);circles(160,178);
    circles(160,128);
    flash();flash();flash();
    gfx_off();
}
```

```
void circles(x,y) SHORT x,y;
{
    int r=10,c;
    for (c=1;c<32;c++)
    {
        gfx_setpen(c);
        gfx_circle(x,y,r);
        r=r+2;
    }
}
```

```
void flash()
{
    int a,b,c;
```

```
    for (a=1;a<32;a++)
        for (b=1;b<32;b++)
            for (c=1;c<32;c++)
                gfx_setink(c,a/2,b/2,16-(c/2));
}
```

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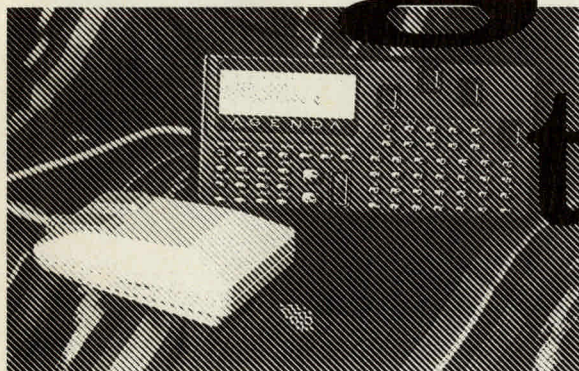
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Agenda to the Amiga



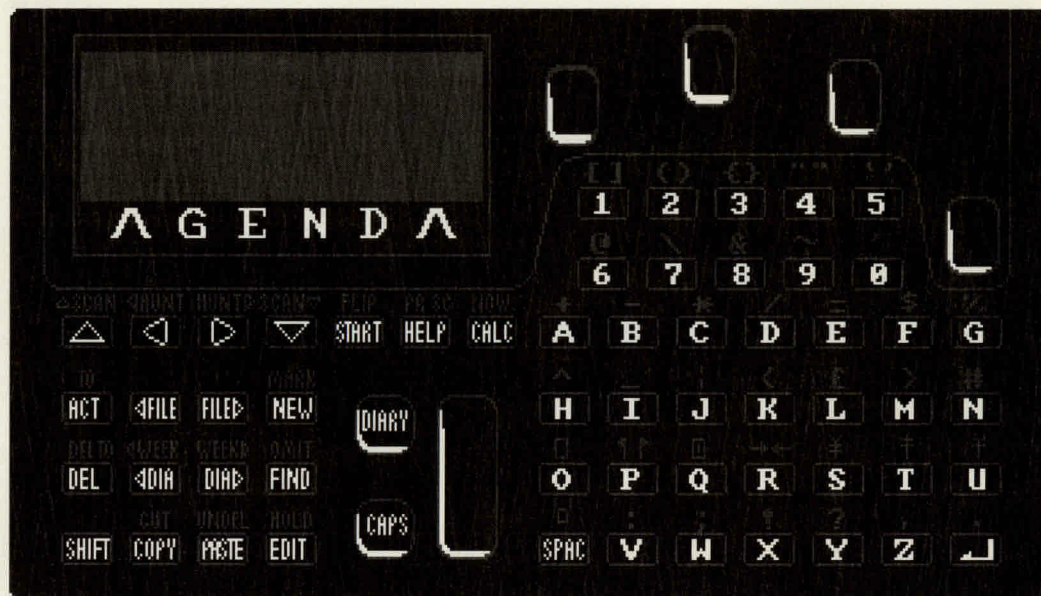
Gwynne Harper describes how computing on the move is arriving at the Amiga.

How many times have you sat on a train or plane and wished your trusty Amiga was with you, helping to while away the hours usefully? As long as the portable Amiga remains a twinkle in Uncle Irving Commodore's eye, this seems impossible. Not true, however! I really missed my 2000 wherever I went, and so I did something about it. For the last year my mobile computing needs have been met admirably by a little gem - a palmtop computer called The Agenda.

If you think about it, other than Lemmings most serious computing for the average Amiga user involves writing and manipulating chunks of text. If we leave the games safely in the realms of Nintendo (a device which to sit next to, has the irritation value of a video Sony Walkman), then there are several options left. Machines are now available from Sharp, Casio, Atari (horror!) and, of course, the original Psion Organiser, all of which are smaller than any laptop and accept text by the bucket full. So why the relatively unknown Agenda?

Well, if you've ever tried to type more than your name and shoe size on most of the above, you'd soon look for something which has more than a keyboard with which archie the ant would have difficulty. After all, the reason why you want the thing is to type, not to stab blindly at a closely-packed sea of rubber buttons. Secondly, most of the Japanese offerings are in effect electronic organisers, and as such are yuppie toys with all the computing power of the average telephone.

"Most of the Japanese offerings are in effect electronic organisers, and as such are yuppie toys with all the computing power of the average telephone."



The Agenda has, far from the pitiful alphabet sea a unique extra-seven large buttons strategically placed to lie under the fingertips of a right hand, three for the thumb. Pressing different combinations of these results in not only the whole alphabet, but also numbers, punctuation and all of the word-processing goodies such as centring, tabs and the like. I was a tad suspicious of the claims of just how quickly this lot could be learnt, however it's true to say I got the hang of most of the alphabet in an afternoon, and all of it plus numerals and common punctuation in two days. Easy!

The Agenda's other functions include data storage, diary functions, an electronic notepad (for those such as myself who are terminally hard of thinking), a calculator and as mentioned a full word processor.

The basic machine is either a 32K or

64K model, with extra 32K storage cards available which plug in underneath. Interestingly, these are not EPROMs but true RAM and a 5 year battery. You do not therefore need to re-format them in order to liberate used memory space. Also available for the expansion sockets are language translators, a finance and maths card, and a Lotus-compatible spreadsheet.

The diary will note appointments, and if wished set alarms from today to beyond the end of the century (by which time we'll all be using our watch-based Amigas!). The alarms can be set from every minute to once a year, so there's no excuse to miss the anniversary any more.

The calculator without the additional card is rather disappointing - it has no functions beyond the four basic operands and percentages. With it (an extra £35 or so) it will even cope with numbers the

TEST DRIVE

complexity of the tax returns on the national debt of Brazil.

The word processing power of the Agenda, on the other hand, is remarkable. Quite frankly it has everything your favourite Amiga-based WP has, including copy/paste, pattern matching, wild card searches, justification and tabulation. The latter is particularly good, with the ability to enter data in any order to a pre-headed series of columns.

On board programming is a mix of fine-tuning your machine to your own likes and the setting up of macro-type shortcuts.

The Agenda is also, to a degree, programmable. There was originally to be the option of a fully-fledged BASIC type language 'ABC' available on an expansion card for the machine itself, but it never materialized. It is, however, available as emulation software on PC's. Alas, no plans for Amiga support yet. In the meantime, on board programming is a mix of fine-tuning your machine to your own likes and the setting up of macro-type shortcuts for repetitive or lengthy tasks.

Communications

And so to communications. The Agenda

has a twelve-pin output for which either an RS232 serial, parallel or PC compatible cable is available. These can be used to connect the Agenda straight to a printer, or to your trusty Amiga. Mine is connected via the serial port, to leave the parallel free for the printer. I only rarely print straight from the Agenda, but tend to upload the files into a word processor first. A Baud rate of 9600 is plenty quick enough but accurate. Remember all the protocols for serial handshaking are accessed via preferences? Well, the Agenda has a similar drawer in which such data can be placed, either from scratch or to modify the built-in defaults.

Assuming you've got 1.3 or above, you can use the unbuffered serial input AUX: from the Shell to acquire your data, e.g.

COPY FROM AUX: TO DF0: Agendafile

would send the data to a file "Agendafile" on the disk in drive 0. Usually, however, it is easier to use communication software - I use 'Diga', but there are plenty of good examples in the public domain. Of course, use of the parallel port would ease a lot of this.

Return communication, in which unfinished documents are ported down to

"The basic machine is either a 32K or 64K model, with extra 32K storage cards available which plug in underneath."

the Agenda for completion on the move, is easily performed in a similar way to the above. For those die-hards out there that refuse the commie-pinko way out and don't wish to use a communications program, remember you can redirect any output to AUX: using the standard operator '>'. You could also use the 'COPY' command, e.g.

COPY FROM <FILENAME> TO AUX:

would direct a textfile to the Agenda.

So what are the cons? The biggest problem with all palmtop devices is the size of the screen. This one is no exception, having a mere four lines of 20 characters. Although all documents are kept as 72-columns, trying to visualize this is like wallpapering the hall through the letterbox (or learning gynaecology). It also doesn't play Lemmings. Apart from that, it's great.

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QUAD

Welcome to the machine, my friends. Our **AUI** demo is now progressing quite nicely - not only can we create a copper list screen display, but we've even managed to get some scrolling text in there as well. Now we can work on the video effects proper.

One of the easiest, and possibly most effective, demo type thing to code is a scrolling starfield. Starfields are easy to spot in other people's demos - look for lots of little dots moving across the screen. Some move fast. Some move slow. They all move, trying to achieve a parallax effect. Let's do it. And how do we do it Reggie, I hear you think? (I'm telepathic, me.)

"If it all sounds a bit tricky, that's because it is. If you can't grasp it don't worry about it - it works."

In case you hadn't sussed it out by now, each star is actually a pixel. Some pixels move slow (one co-ordinate at a time) and some move fast (more than one pixel at a time) and when they reach the side of the screen they start again. Simple, innit?

So how do we plot the pixels on the screen? Do we use some sort of pansy operating system PLOT routine? Not flamin' likely, matey! As before, the OS is away elsewhere, which leaves us with a large bitmap of memory and nothing but the entire 68000-family instruction set for company.

Let's think this out: how do we move lots of stars across the screen. The first idea which came to mind was to use the blitter to scroll individual lines on the display. I wasn't really too keen on this approach, as it meant that altering the starfield to scroll in a different direction would be a bit tricky. The second idea I had was a bit better - keep a table of say, sixteen, stars and move then all individually plotting each to the screen in turn. I liked this way better, so I used it.

Problem: how to plot an individual

Space... the final frontier. This is Reggie Stair's mission - to boldly bring you to where only the hackers have been taken before. You won't need your Intuition here! It's **QUick And Dirty**.

pixel on the screen? Assume that the x co-ordinate can take the range 0-320 on a low resolution screen (try to forget for the moment that our demo's screen is a bit bigger at 44 bytes wide.) Here is the recipe that I use to turn the co-ordinate into an actual memory address and bit pattern.

1. x = the x co-ordinate (0-320)
2. word_offset = int (x / 16)
3. bit_number = x - word_offset * 16
4. bit_number = 15 - bit_number
5. bit_pattern = 2 ^ bit_number
6. screen_address = start_of_screen + word_offset
7. move bit_pattern into screen_address

Looks a bit tricky, doesn't it? Let's try it step by step. In step 2 we calculate the word offset where the pixel (star) is going to appear. We could have used bytes instead of words, but at some stage we would have to have dealt with words anyway - remember, if we tried writing to an odd byte address, we would have crashed the 68000, she don't like no odd addresses.

Steps 3 to 5 calculate the bit pattern that we need to write into the screen address. (Note there iCsC a Step 4!) In a single 68000 word, there are sixteen possible positions which our star can occupy (because there are sixteen bits in a word). We find the number of the bit (i.e. a number from 0 to 15) by calculating what's left over when the x co-ordinate has the word offset times 16 subtracted from it.

For example, if the x co-ordinate was 100, the word offset is INT(100/16), which as any schoolboy knows is 6. The remainder is the part we need, and we obtain this by subtracting 16*6 from 100 which gives us 4. Now we know that it's the

fourth pixel in the word which must be set. Slight complication - we know it's the fourth pixel counting from the right, but we really need it counting from the left. To reverse the pixel number, subtract it from 15. Now we can calculate the actual bit pattern by raising 2 to the power of this number.

Steps 6 and 7 calculate the screen address and pokes the star into it. If it all sounds a bit tricky, that's because it is. If you can't grasp it don't worry about it - it works. Anyway, the code on the Hyperdisk uses a slightly different approach which may make more sense when you have a read through it. I've put in lots of comments to make your life easier, and if you're totally stuck you can always write in for help!

"Moving the stars vertically will entail altering the Y co-ordinates, but hey! I'm sure you can handle it."

To animate the Starfield, we plot several stars and then change their co-ordinates every fiftieth of a second via our control copper interrupt. The result is a nice smooth scrolling motion, with a little depth added by the random speeds. If you wish to change the direction of the stars, simply swap the SUB instruction in the code for an ADD, and change the end-of-screen condition. Moving the stars vertically will entail altering the Y co-ordinates, but hey! I'm sure you can handle it. You might also want to change the colour of the stars by playing around with the copper list.

Next month: more ace demo effects, this time entailing the use of the blitter. Yes, as Reggie would put it: "We have Bouncy balls! Bouncy balls!"

"The result is a nice smooth scrolling motion, with a little depth added by the random speeds"

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AUI SPELL

Paul Overaa completes the 'rapid scan' stage of his **AUI-SPELL** spelling checker program in this last installment...

This month, which sees the spelling checker brought to the final stage of its 'scan only' version, is the last in the current series. In the next six months or so the program's dictionary (which currently stands at around 12000 words) will be both increased and supplemented with additional dictionary files in order to check the efficiency of the routines I have written. Only after these routines and files have been in use for some considerable time will I make the move to a WorkBench/Intuition based version.

The current version (as a rapid scan spell-check utility) is already proving useful. During my article and other technical proofing, for instance, I invariably have a hard-copy available. Being able to quickly check the corresponding disk version **AUI-SPELL** has greatly speeded up the marking up process.

Since this is the last instalment it is worthwhile recapping on the various development stages... First we produced a general plan of the main areas which needed to be tackled - separating words, sorting them and removing duplicates etc.

Underneath this apparently simple CLI/Shell utility, quite a lot of processing gets carried out. During this series you have seen the main stages as they were tackled. Word separation, which needed to be fast, was achieved by writing an assembler 'word separator' routine. The assembler code was then expanded to provide word comparison and the all important list-tied sort-tree creation routines. The tree structure created by the program was then subsequently used to search for and mark all occurrences of unknown words in the text file. The result at this stage is a program which allows for the spell-check screening of large amounts of text relatively easily.

The idea of 'marking' unknown words in the text file is fundamental to the approach we have chosen to adopt. We did however want a scheme which allowed for expansion in a way which was essentially independent from the bulk of

PART X

the spelling checker code and it was primarily because of this need that the idea of the ADT entered the picture. Our implementation of both the stack and dictionary ADT has now enabled the inorder tree search to be carried out very easily. The most obvious benefits are that the tree search routine does not have to worry about how either the dynamic stack nor the dictionary files are organised internally.

Normally one would expect the 'search and mark' routine to be quite complex but, because most operations are carried out using the ADT interface calls, the opposite turned out to be true. The 'search

and mark' routine for the current **AUI-SPELL** is called `InorderTreePrint()` and the following fragment shows exactly how the ADT units are being used...

```
void InorderTreePrint(TEXT
*dictionary_name_p, struct TreeNode
*node_p)
{
    COUNT i; TEXT *byte_p;
    struct ListNode *duplicate_p;
    BOOL exit_compare_flag=FALSE;
    DICTIONARY *dictionary_p;
    g_parent_stack_p=CreateStack(struct
    TreeNode *);
    g_path_stack_p=CreateStack(UBYTE);
    dictionary_p=CreateDictionary(dictionary_name_p);
    if(dictionary_p)
    {
        node_p=FindLowest(node_p);
        do { /* identify node words present in
        dictionary file */
            if(!IsPresent(dictionary_p, node_p-
            >word, node_p->count))
            { /* word is not present in dictionary */
                /* set bit7 high for node word and du-
                plicates... */
```

New Cli Window

AUI-SPELL CLI/Shell version 0.20 Paul Overaa (C) May 91

Please wait...

The Commodore Amiga is a brilliant machine and even from languages like Basic it is possible to write surprisingly powerful programs. As you progress as a programmer, and especially once you start to learn some C or 68k assembler, you will realize that most of the power of the machine doesn't actually come from the languages as such - it comes from the way the Amiga's software is organised. The Amiga operating system contains a massive collection of pre-written function libraries which allow you to duplicate Intuition style gadgets and menus, interact and communicate with both the operating system and other programs, and seemingly do a million other things besides. You can even write your own spelling checker program!

As you start to look beneath the surface of the Amiga it doesn't take long to realize that you are dealing with no ordinary machine: The Amiga, as you will no doubt know, uses a 16 bit processor called a Motorola 68000. This ensures that the machine is fast and allows for more memory than was possible with older 8 bit machines. There's also a few specialist custom chips built in including the 'blitter', which can move graphics data at speeds of up to a million pixels a second, and a co-processor which handles many aspects of the screen display leaving the 68000 free for other work. These super-chips allow the Amiga to provide a graphics environment fast

Figure 11: Silly, and not so silly, spelling slips are easily identified.

AUI SPELL CONTINUED

```
byte_p=node_p->word;
for (i=0;i<node_p->count;i++)
{
    *byte_p>(*byte_p|=0x80);byte_p++;
    duplicate_p=node_p->head;
    while(duplicate_p)
    {
        byte_p=duplicate_p->duplicate;
        for (i=0;i<node_p->count;i++)
        {
            *byte_p(*byte_p|=0x80);byte_p++;
            duplicate_p=duplicate_p->next_node;
        }
        if(!(node_p=FindNext(node_p))) exit_compare_flag=TRUE;
    }while(!exit_compare_flag);
    KillDictionary(dictionary_p);
}
else printf("could NOT open dictionary\n");
KillStack(g_parent_stack_p);
KillStack(g_path_stack_p);
}
```

The above routine searches out the unknown words and marks them by setting the uppermost bits of each character. By the time this process was complete all of the difficult computing jobs have been carried out - all that is then needed is some means for displaying the file and identifying all of the words which have had their high bits set. Here is the routine that handles subsequent line printing...

```
void PrintLine(TEXT *start_p, TEXT *end_p)
```

```
{
    BOOL highlight_on_flag=FALSE;
    while(start_p<=end_p)
    {
        if(!highlight_on_flag)
        { if (*start_p&0x80)
          {
              g_text_p=message[HIGHLIGHT_ON];
              while(*g_text_p) putchar(*g_text_p++);
              highlight_on_flag=TRUE;
          }
        }
    }
}
```

```
else { if(!(*start_p&0x80))
{
    g_text_p=message[HIGHLIGHT_OFF];
    while(*g_text_p) putchar(*g_text_p++);
    highlight_on_flag=FALSE;
}
}
putchar(*start_p&0x7F); start_p++;
}
fflush(stdout);
}
```

The current scheme, incidentally, allows **AUI-SPELL** output to be sent to a disk file: The following command will check a file called 'chapter1' (on df0:) using a dictionary file called 'dictionary' (on df1:), and will send the output to a ramdisk file called 'output'...

```
AUI-spell >RAM:output df0:chapter1 df1:dictionary
```

This latter file when displayed using a 'type ram:output' command will, since the output contains all of the necessary highlighting control characters, appear on the screen exactly as it would under normal program use. This allows sets of files to be handled using a batch style script approach (which can be useful on occasion).

It is worth pointing out that this 'high bit' marking scheme is only loosely connected to the current program. It would, for instance, be very easy to modify the above code to output unrecognized words sandwiched between a pair of suitable control characters. This could be used to create an output that, when used with a particular wordprocessor, could indicate the unidentified words by high-lighting, bold-printing, italicising etc.

One path which although we have not pursued is also interesting enough to mention is that instead of using the display routine shown above, we could have created a custom font in which the character values associated with the 'high bit set' characters were created as inverse characters. This approach, which may yet find use in latter Intuition orientated stages, would mean that all of the standard Amiga text drawing routines would handle the 'highlighting' of unrecognized words automatically, i.e. as part of their normal text drawing operations. That however will be a story for another time...

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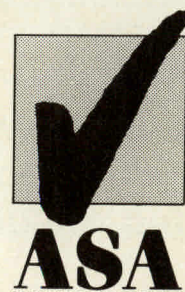
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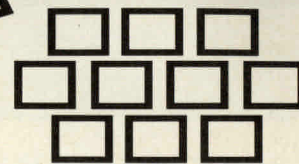
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AMIGA ANSWERS

Andy Eskelson searches out the answers to your tough technical questions



NOTE:

When writing to Amiga Answers, please include as much information as possible about your system, and about what software/hardware you are running this will help to determine what your problem might be.

Dear AUI,

Please help me. I am a video enthusiast and at present am struggling with an MSX computer (pardon the expression though it does its humble best) in an effort to put titles and credits on some of my home videos. It is obvious that I require a machine with rather more facilities than I have at present and the only viable option appears to be the Amiga.

Having studied a variety of magazines dealing with the Amiga series of computers, I have (naturally) chosen **AUI** as my main fund of information. Unfortunately though I am fairly familiar with large mainframe computers I have rather less knowledge of the smaller variety. Apart from the video title requirement, in the foreseeable future I shall also require a DTP facility. Although initially the A500 should satisfy my requirements I am led to believe that in a short time it would rather resemble a hedgehog with bits sticking out all over the place. This would not incur "management's" favour. I believe for some additional expense the A1500 would offer me better facilities all contained in one box. Apart from the extra floppy drive and internal slots for extra RAM what are the differences? Can an internal hard disk be installed or would I be better off with an A2000?

Would it be advantageous to start with the A1500 with at least 2Mb of RAM? Is the advanced chip set a good idea? If so why? If not why not? I am told that the G2 genlock is the one to aim for. Your comments would be appreciated. I am sure there is a book available that would answer all my queries but which? Any recommendation you can make would be welcome.

Many thanks for an interesting and informative magazine even though the spelling and grammar sometimes leave something to be desired, but we can't all be perfect (perish the thought)

**J.M.Gatt
Harrow**

Dear J.M.Gatt,

I agree the A500 can get a bit messy, that's why there is a market for things like the Checkmate system. The A1500 is a better choice, but once again let me say... THE A1500 IS a A2000! Open the case and there is a rev 6.2 2000 series motherboard in there, so that should answer your questions.

Internal hard disks are the same as for the 2000, so no problems there. (My 1500 has a 2091 hard drive, 2630, flicker fixer, plus a few other things fitted and they all work without problems.)

As for the memory, get as much as you can afford, you never seem to have enough!

I have not seen any books on the subject yet but as you say there are probably some about, so keeping an eye out on the adverts and in the bookshops would be prudent.

The G2 genlock is very nice, but my general advice is GO AND SEE ONE IN ACTION FIRST, if possible compare it with others, you never know you might find that a much cheaper system will suit your needs better.

We can't all be perfect... and there I was thinking it was everyone else who was wrong!

Dear AUI,

Just for the record my system consists of an Amiga A500 (upgraded to 1mB) one 3.5 external disk drive and a HP deskjet 500 printer. I am writing to ask if any readers can help me. As well as computers I am also interested in VHF monitoring and I have an AOR AR2002 scanning receiver which has an RS232 port for external computer control. I was wondering if anybody knows of any dedicated software with which to run the AOR from the Amiga? I know of an interface called 'Scanmaster' but this is not Amiga specific and requires a comms program to work but this is not really what I am looking for. I know programs exist for similar receivers e.g. the AR3000 and an IBM compatible can work together using 'scan' or 'acepac3' but I cannot find anything similar for my Amiga. Anybody got any ideas?

Keep up the tutorials/beginners articles as I am relatively new to computing and I find them very informative and interesting.

**Paul Morrey
Stoke-On-Trent**

Dear Paul,

I must admit that I have not seen much for the Amiga in that line, they all seem to use the grotty PCs! There are a number of specialist receiver systems available for the Amiga, in the Weather Sat field (but nothing that I can find for the AOR, so you will have to write your own program! (or does a reader know better!))

Thank you for the comments about the beginners' articles, as long as there is a demand for them and there certainly seems to be they will still be published. And there is always something even experienced users can learn.

Dear AUI,

I am the owner of an Amiga 500 (Kickstart V1.3) recently I de-

cided to expand my A500 to 1MB. Although I was going for a half meg board (attached to the trap door) I found out that my Amiga had space for four more memory chips to be installed internally, so I decided to go for it.

I went to the official Commodore service and had them installed. My Amiga was running great and I was up to the skies. But all this was gone when I used the 'avail' command from AmigaDOS, which reported that my memory was half chip and half fast. My Amiga has the A8327A Agnus installed and should see all the memory as chip. When I called the Commodore service they said that they would fix it and also said that these expansions have problems. Do you happen to know anything about this?

I also would like to ask for your advice on my decision about fixing my ram to chip or not. (I am considering to buy an extra half meg for the trapdoor) If I do this will there be any trouble to run programs which do not run with fast ram? If yes, will I be able to turn it off with bootblocks like the CCS?

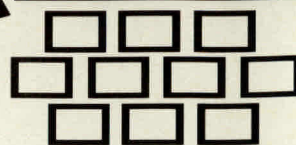
Despite my problem with this extra ram I wanted to get some more speed from my Amiga, so I changed my normal 68000 for another made by Toshiba which runs at 10Mhz. Unfortunately the performance of my computer did not seem to improve a bit so I have given it back to where I bought it. Can you give any explanation to this?

Through my search I have found someone who can supply me with a 68010 gold (as he names it) running at 16Mhz. What is the difference from a simple 68010? Which would you recommend most the 68010, 68010 gold or the turbo 68000 at 7/15 Mhz from CSA.

Finally I do not seem to be able to run X-COPY 3.1 professional though it loads, the mouse pointer will not appear and it seems like

AMIGA ANSWERS

C O N T I N U E D



◀ the computer has crashed. Do you think that it has to do with my drive (it was not running even before I get the extra ram)

There are still many of questions I have not asked, but I think that this is enough for one time. Please answer me at least about my memory cause I am really in despair. Closing my letter I do not think I have to mention what is already known: **AUI** you are the best

Haris Koutsouris
Salamina
Greece

Dear Haris,

The additional places for ram chips on the motherboard was a development that CBM were working on, however it is **NOT RECOMMENDED** that they be used for ram expansion. Your service centre should know this! It also can cause problems with any expansion ram in the trapdoor.

If you have the new Agnus you can use all of the memory as chip, simply by cutting a track jumper and installing a link or two. Unless you are very heavily into the audio or graphics scene then the extra chip memory will not bother you too much. I have no idea what CCS is! so I cannot comment on that at all.

You have made a very basic mistake with the processor speed. If you bought a 68000 that **COULD** run at 100 Mhz and plugged it into the Amiga the Amiga would **NOT** run **ONE MICROSECOND FASTER** that it does with the standard 68000 fitted.

The Amiga runs at a little over 7 Mhz this is called the **CLOCK** speed. This **CLOCK** signal is generated by the Amiga **NOT** the processor. The reason for this is that all of the custom chips need a clock signal, as does the video circuit. If you increased the clock speed then your Amiga would process faster, but the custom chips would not work!

What you have to do is switch the clock speed up when another processor is fitted, but change it back what the custom chips want it. that is why the Midget Racer etc. have extra circuits on them.

You will not get a dramatic

increase in speed unless you go for an advanced processor such as the 68020/030 but this is very expensive. You will only get an increase in processing speed, so the improvement is very dependant on what you are doing with the Amiga.

There is **NO OFFICIAL** way of speeding up the A500, so you have to look at each third party speed up and judge the merits of them as they stand. **AUI** has reported on several of them in the past.

The 68010 will give a slight increase in speed, because some of the instructions have been improved internally so you do get about a 10% increase. In my opinion that is not worth the bother. (there are a couple of incompatibility problems with the 68010, but nothing drastic)

I am a little confused at your comment about your drive not working. This might very well be a problem, however if X-copy does not work with the drive unplugged, take it back to the shop and get them to try it out.

And of "Toshiba 68000"? So far we know the 68000 series is exclusive to Motorola! If you have something else, it is the first that we have heard of.

Dear AUI,

I own an A500 with Workbench 1.3 that seems to be a bit haywire, in that the only keymaps that I can use are gb and usa, and nothing else.

When I try to make any others work I get the message saying cannot open keymap file: DEVS:keymaps/ whatever keymap I want to use. Is this a fault of the machine, Workbench or me? (I know which one I'd choose!)

Neil Summer
Southport

Dear Neil,

A simple question to which there is a simple answer. The additional keymaps can be found in the devs / keymaps directory of the **EXTRAS** disk. If you want to use them, you will have to copy them across the the Workbench devs / keymaps, assuming that you have enough room on your Workbench disk to do this.

Dear AUI,

I hope you can help me, I'd better tell you what my problems and requirements are.

I am currently using an Amiga 500 computer and I use a Midi interface and sampler.

Is there a software package that can enable me to connect my short wave radio using CW (Morse) and my Amiga computer to convert this Morse code and show in English on the screen of my computer.

I would appreciate any comments and or any suggestions where I could go to purchase such a program or any information of any packages that you have which may do this, as I am having great difficulty trying to find a package that will.

Gordon Carson
West Lothian, Scotland

Dear Gordon,

I have heard of a few systems, but as with all reader systems they do rely on good sending. Someone sloppy using a brasspounder will be almost impossible to decode. You have a couple of options. Get a hardware device, such as the KAM all mode TNC, or other such data reader. Or get the Ham radio pack from George Thompson (not a million miles away from you!) I **THINK** it has a CW reader program in it. Tel 077082-234 (Arran) for more info.

Dear AUI,

As a newcommer to the world of home computing, via an Amiga 500, upgraded to one meg, I seem to be having probably a simple problem but one I cannot get an answer to.

It all started unfortunately with the hyperdisk free with the July edition of **AUI**. I managed to load the disk successfully and go through it once but once I finished zapping squamble the light started to flash on the caps lock key and the whole keyboard refused to function. The only way to get it going again was to shut off at the mains, wait for 30 secs and start again. The only problem being that I am unable to reload the squamble game, and being advised by the computer to use

diskdoctor to rectify the problem with the program. That I could live with but now the keyboard has started to lock up at any time which is quite frustrating when using CLI.

Speaking to my local dealer he was unsure of what might be causing it and advised me to check everything out for viruses. This I have done and everything was virus free, but where do I go from here?

From a hardware point of view the Amiga is connected to a Microvitec monitor via an Amstrad amplifier, could this be the root of the problem?

Finally does anyone know how I can run IBM written programs on the Amiga? If so could you let me know.

R.L. Harding
Swansea

Dear R.L. Harding,

That it is unlikely that the Amp and monitor are your problems, but then again I have never liked Amstrad kit. The flashing caps lock could be a clue, there is a sequence that can tell you if anything is really wrong.

* One flash ROM checksum failed

* Two flashes RAM test failed
* Three flashes Watchdog timer failed.

It sounds as if you have a problematic connection somewhere. There is a stock fault that can cause all sorts of problems. That is the big Agnus chip can sometimes get a bit dodgy and this is cured by reseating. Often all that is required is a thump. Agnus is a large chip with edge connectors on all four sides, so you can guess that they can cause problems. Suggest this to your dealer and get him to do the thumping especially if the machine is still under guarantee.

Other than that it will be a trip to the repair centre.

Your other point about running PC software on the Amiga, there are a couple of hardware units the ATonce and the KCS unit, both do a very good job, but at a cost (See the adverts for the latest prices but it shouldn't cost you more than £199.00.)

Image Processing

AMIGA ANSWERS

Dear **AUI**,

For the past five years I've been one of the herd, doing virtually all my computing on a steadily increasing stream of IBM clones. This may be about to end.

I was recently talking to a friend about the (very) high cost of hardware and software involved in putting together a reasonable image processing set-up on the PC, when he suggested I use an Amiga and contact you. Can you help?

**Yours,
F. Sutcliffe**

Dear Mr Sutcliffe,

It's very easy to discover how amazing the graphics capabilities of the Amiga are. You just have to flick quickly through this issue of AUI to realise that the lump of beige plastic which can be so easily labelled a games machine is one of the hottest image systems around.

Image Acquisition

Before you can start image processing, you'll need to get an image from somewhere.

Assuming you're starting with an image which already exists, you must convert it into Amiga-readable form. There are many, many video digitisers around which will do the job very well. Most cost between one and three hundred pounds, which is less than you'll need to spend on a decent video camera (reviewed in the July 1991 issue). Alternatively, you can use one of the graphics bureaux which have popped up. Using expensive professional quality video equipment they can provide images to your exact requirements.

If your images are in the form of photographs, you can achieve remarkable results by using a scanner. A flat bed scanner, such as the Sharp units, can produce incredibly high resolution colour images. For simpler black and white scans, the 400DPI of the Pandaal Handscanner will more than suffice (reviewed **AUI** September 1991).

Some Useful Information

NewTek's DigiView -

HB Marketing 0753 686000 £149.95

VIDI Colour Solution -

Rombo 0506 414631 £179.00

ColourPic -

JCL 0892 75791 £399.00

Framegrabber -

Marcam 0604 790466 £530.00

Pandaal Handscanner -

Pandaal 0234 855666 £189.95

Sharp colour scanner -

Silica Systems 081 3091111 £lots

Nik Williams Broadcast Video

0792 470503

Weird Science (digitising service)

0530 242233

If you wish to create the image yourself from scratch, you'll need a good art package. Luckily, there is only one you'll need to concern yourself with: Deluxe Paint IV (**AUI** October and November 1991 issues) which supports 2 to 32 colour modes as well as EHB (64) and HAM (4096).

You might consider using an input device other than the standard mouse. For example, the Genitizer Drawing Table may make things easier (November 1991 issue).

Deluxe Paint IV

Electronic Arts 0753-549442 £89.95

Genitizer

Datel 0782 744707 £129.99

"If your images are in the form of photo-graphs, you can achieve remarkable results by using a scanner"



Ray Tracing

Creating photographic quality images of objects which don't exist is easy with the large range of Ray Tracing packages available for the Amiga. The easiest to use is probably Real3D (**AUI** November 1991).

Real 3D

Alternative Image 0533 440041

Imagine

Alternative Image 0533 440041

Converting between formats

The clear winner for this task is The Art Department professional (**AUI** July 1991). It can load and save between more formats than you could even need including: IFF, GIF, TIFF, SCULPT, PCX, MACPAINT and POSTSCRIPT. By using utility programs such as Dos-2-Dos and Mac-2-Dos you can convert images between most machines.

The Art Department Professional ASDG/ HB Marketing (see above)

Dos-2-Dos

Trilogic 0274 691115 £29.95

Mac-2-Dos

Silica 081 309 1111 £79.95

Processing

At last, we've reached the important part! Depending on the degree of quality you

are looking for, you have several options. Even an art package like Deluxe Paint contains many options for subtle colour changes, outlining, perspective effects and image wrapping. For more tradition processing (line detection, blurring, Fourier Transforms) a package called PixMate is worth its weight in gold floppies. And let's not forget The Art Department, which also contains many excellent functions which operate on a 24bit level.

PixMate -

MJC Supplies 0462 481166 £34.95

Real colour -

The world of 24bit graphics

Although the Amiga's HAM display is capable of some astounding results (320 by 512 by 4096 colours is still impressive,

even by today's standards) for truly professional images you'll need to enter the world of True Colour - or 24bit graphics.

In HAM mode, the Amiga is effectively using 12bit graphics to get its 4096 different shades. With 24bit graphics you can have 4096 times 4096 = 16,777,216 different colours. Most 24bit graphics systems can support very high resolutions, which means your drawings are going to be better than most television sets are capable of displaying!

The easiest way beyond the 4096 colour limit is to experiment with the HAM-E system (**AUI** August 1991), which comes with its own amazing paint package. Jumping in at the deep end will mean you'll soon have a 24bit graphics board (**AUI** November 1991), 8Mbs of memory (**AUI** November 1991) and a 68040 (**AUI** October 1991) to keep it all company!

HAM-E

Checkmate Digital 071 923 0658 £299.00

AdRam

Surface UK 081 556 6677 £119.00

Harlequin

ACS 031 557 4242 £CALL

Fusion Forty

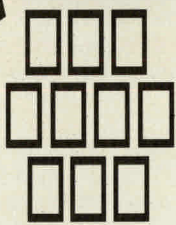
Power Computing 0234 843388 £2000.00

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Dear AUI,

In Newsfile you published a news story on the Megaboard. Have you seen it? It's not as is shown in your picture, well, not completely, it has a little tail which you have to go under the bonnet to fit, which blows away your warranty!

I'm not very good on the techie side and the sizes quoted didn't mean much to me. I sent away for one of those gadgets as it seemed so good, but, when I read the instructions I learned that it did not work with my A501 expansion. No 2 megs for me. Having phoned Evesham I have returned my unit for refund since the 1.5 Meg upgrade also means that I have to open the case.

I have taken out an extended warranty to safeguard me from expensive repairs as I am a living coward, and I leave well alone. However, 'd love to get my hands on that extra memory, save on those GURUs.

**J.Chantler,
Surrey.**

Dear J.Chantler,

Thanks for sharing your little story with us. If you want extra memory above 1 Meg, but do not wish to "go under the bonnet" you need an external expansion. See the review of the SupraRAM in this very issue!

Dear AUI,

Disregarding some people's comments I found The Big Alternative Scroller demo very good. It was the sort of thing that I was looking for quite some time. I have only one niggle. I find that I can only type three lines of text at a time. I have to type three lines and transfer to video, then repeat, etc, etc.

If the Scroller is complete, except for the SAVE function, why the big difference in the price.....£2.95 with the mag...£50.00 for the commercial version.

Why would anyone want to buy the commercial version?

**Chas Dainty,
Essex.**

Dear Chas,

The Scroller was not a COMPLETE version bar the SAVE function. It was a very limited version - giving some 50 characters of text. The full version will allow the user any amount of text (and lines of text) required. Ours is not to question the price of software targeted at a specialised market. The Big Alternative Scroller is competitively priced in the video titling market and overall the demo was well received.

Dear AUI,

Just read your reply to Ms Mari in AUI, September 1991. WELL BLOODY SAID!! Dunno what the damn woman's doing near a computer anyway. She should be looking after the kids etc.

Anyway, must dash. Taking the missus down to Texas to choose her new kitchen.

Tit and Bum forever. Eh lads?

**Dave C.J. Tilley,
Devon.**

Dear C.J.,

You sound like a real wallowing in the sty, male chauvinist pig! Tit and Bum? You should be reading the Sunday Sport not AUI. We want more women using computers and more men helping out in the home. It makes understanding of each others outdated roles that much easier for both men and women. Once you've bought your wife the Texas package, you had better help her in it. Perhaps you could also take to heart and translate into a male form the famous description of the perfect woman as a chef in the kitchen, a lady in the drawing room and a whore in bed. And now maybe a user on the Amiga too.

Dear AUI,

I have been a director of a small publishing firm since 1970 and am well aware of the problems involved in the production of a magazine. It is a thankless task as there is always too much of this and not enough of that. We only do books now which makes for a much calmer environment!

I must agree with Andrew Williams in August 1991's AUI. Why oh why alter the size??? I'm a semi-serious user and like the idea of all the games together - that way I can ignore them! What I also like is to cut out useful articles and file them in a rig binder using clear inserts for future reference. This sometimes causes problems as with your new page size many won't fit!

My main interest is DTV. I have an Amiga 2000HD with Genlock, Deluxe Video III and Deluxe Paint III. I use video cameras and do a fair amount of editing and I am pleased to see that computers with software and video cameras are moving closer together. Long may it continue and hopefully compatibility problems will diminish. I like the way you keep up with the new products, but I don't think you have persuaded me to go for Ham-E. I don't think I have the patience!

**Ted Waller,
Gwent.**

Dear Ted,

Sorry about the size change, but with a cover-mounted disk we would have lost most of our cover - so we made it that little bit larger so that you'd be able to see AUI on the shelf. It also allows us to fit more pictures and text onto each page. If you have access to a photocopier you may be able to reduce the pages by 80% and therefore allow you to keep your AUI intact.

Dear AUI,

I have been the proud owner of an Amiga 500 for about 12 months, and in that same time, I have watched the sales figures of Amigas and Amiga magazines increase quite considerably. After making contact with other Amiga owners I have come to the conclusion that there is now a large percentage of Amiga devotees who have never before had any involvement with computers. If you agree with this conclusion I would like you to devote more space to helping novices, who I feel sure are in a position very similar to myself.

After doing all the usual things when first setting up my Amiga i.e. typing a letter on notepad, looking at the preferences, which

scared me silly, I went for the safe option. I played the games! Needless to say, that was great fun. However, after a while I realised that this was a shocking waste of my machine. I needed information on how to put my Amiga to better use.

When first buying AUI, I thought "Oh goodness me, what have I done! These people don't even speak English!" I realise that most of you have spent many years with computers and the terminology used must be of second nature to you, so I do appreciate the fact that when possible you try to keep things simple, but do you realise the effect you have on the central nervous system of people like myself, when you suggest we try using things like FixDisk, Powerpacker, Diskmaster etc. My wife once found me lying flat out in a coma simply because I'd read an article of yours about ripping modules off a disk!

Seriously, after sticking at it for a few months I was able to get my act together and decided to go for it. I sent my money off for a copy of SID which I received back promptly. (Thanks NBS). The result of such a bold piece of action was that I spent a long time looking at the screen wondering where the hell to start with this wonderful utility that makes life easier for the computer user. Quite simply, even the documentation on utility disks assumes you have a basic knowledge of computers. That, of course, is the way things should be as they are providing you with a tool to use and not a tutorial for beginners. However, it still leaves me, and I suspect, quite a few others in quite a pickle!

Do you think it would be possible for you to provide these tutorials? I am sure they would prove to be popular with both your "novice type" readers and your more experienced users who could use such a series of articles for references purposes.

Whenever they are experiencing problems with a particular program they could prove to be a real help. As you have said yourselves most problems arise by people overlooking simple things, and if, for example, you did a step-by-step guide to using FixDisk, Powerpacker etc, it would be possible for you to sell them at a later date in a booklet or as manuals, especially as a lot of public domain disks don't have any documentation at all!

Finally, if your answer to all of the above is no, I would be grateful of any suggestions you

think would be of help.

**Ian Sloan,
Liverpool.**

Dear Ian,

Isympathise with the dilemma faced with many "new" Amiga owners. The Amiga is relatively mature as a computer and magazines, such as **AUI**, have covered most easy and beginner topics so many times that it is hard to start from scratch again. We do offer our Understanding the Amiga series which is proving very popular, and of course, the Amiga Answers column. Amiga Answers is two pages because that is our response - if more people required help we would increase the section accordingly - we try to answer all queries, but due to magazine production this may be 2 or 3 months after the original query date.

There are many books out there, the best thing to do is go through the original Amiga manual a few times and then compile a list of problems which you can't get to grips with. A user group, such as ICPUG, will be able to provide a quicker advice turnaround than a magazine. Decide what you want your Amiga to do, and do it. If you get stuck enquire about it. If you come to us with a precise problem we can answer it individually - we would probably devote a large part of the magazine to problem solving if people want to send us their problems.

If you wish to learn Workbench then play about with your Amiga, for CLI, read Mastering AmigaDOS Vols 1 & 2, Mastering Amiga C is new and written by Paul Overaa. Also, why don't you check out the splendid Abacus series of Amiga books.

However, we are looking at number of ways of helping new users, not necessarily only through the conventional form of columns in the magazine. As usual we are looking to do something creative to help. So read future **AUI** issues for some news on the subject.

Dear AUI,

I am about to enter the final year of my Media & Design degree course, I am producing, for my major projects, an interactive desertion using my Amiga A500.

The subject for this desertion is "Leisure Software" with a particular emphasis on Public Domain software, Shareware, etc. I will be investigating the main areas of current debate with all the public media, i.e. sex, violence, sexism, racism, censorship.

I am now collecting research material for this project and would like to ask readers of **AUI** if they can please help.

I would be grateful if people could send me examples of PD and

Shareware that illustrate the above concerns; demos, slide-shows, games, etc.

As a student, on limited funds, I cannot pay directly for such a wide range of software, however all contributions will be acknowledged, disks returned or postage refunded if required and senders rewarded with a full disk of clip art, graphics utilities, and piccies.

Incidentally, the common used term "Multimedia" is a misnomer, the word media is plural and implied multiplicity of mediums - "Hypermedia" is better.

The magazine is getting better, many congrats on using Amigas for a lot of the production. It's about time this computer got the recognition it truly deserves.

**Bill Dawson,
Southampton.**

Dear Bill,

Here goes, you asked for it, and we'll do it. Bill's address for anyone who wishes to contact him is:

**44 Herrick Close,
Southampton.
SO2 6NF**

Maybe, once your project is complete, you would like it published - to boost those marks. Good Luck.

On the point of Multimedia and Hypermedia, both "media" are as you say, plural. But think about it this way, "multimedia" can mean "having many means of communication", where "media" means "having more than one means of communication" "Hyper" means "more than normal", or "excessive". The two words describe two different concepts.

Dear AUI,

In your reply to Gary Hardy (letters September 1991) you implied that the stand-alone version of the CDTV was a waste of money at the side of the add-on drive. As a potential purchaser of the former, and the owner of a well expanded A500, I cannot agree with this claim. Before encouraging your readers to "waste their money" on the alternative option you might like to consider the following points.

Firstly, the price differential between the two drives is not that large. The CDTV is being offered at £599, the add-on drive at £399. Apart from the CD drive itself, £200 of the hardware of the CDTV is Amiga circuitry, leaving £399 for the CD drive if a similar level of value is to be achieved.

This brings me to my second point, the features missing from the add-on CD ROM drive. Its lack of remote control would re-

move half the fun straight away, forcing the user to fall back on the familiar input methods of mouse and keyboard. The unit could not stand alone as a computer, perhaps not even as a CD player, and would not be the correct shape for stacking. Connection via the same port as the A590 would mean that hard drive users of the A500 would face repeated insertion and removal of drives after adding a CD ROM. Commodore has said nothing to indicate that any software will be bundled with the CD drive or that the extra MIDI and smart card options will be implemented.

As it stands now, the CDTV will accept a standard Amiga floppy drive and a Amiga 1500/2000 keyboard. With these additions it will be easy to transfer suitable software from the CDTV to the hard drive on my existing computer. No tedious unplugging sessions will be required and wear-and-tear on the expansion port will be avoided.

If the CDTV got no more support at all it could still be used as a combination of Hi-fi and CD player and 1Mb floppy disk Amiga. The number of titles on CDTV now is already more than I remember for the early months of Amiga itself. A fact which suggests a healthy future. People who fear the threat of CD-I should remember that the superior format often loses out to the cheaper, as in Betamax versus VHS, or the earlier computer war between Atari XE and Commodore's 64.

Far from being a "waste of money" the CDTV is an ideal compliment to most existing Amiga systems. Its many advantages make the £400 add-on drive look absurdly over-priced.

**Graham Auty
Leeds**

Dear Graham,

The price of the CD add-on drive has not been confirmed as £399, but some observers think that anything over £199 could make it

less popular and not such good value. However, there will probably be many who will buy it no matter what the price. The need to possess the latest developments burns fiercely in many a techno-freak breast!

The exact add-on drive specifications and compatibility with current Amiga hardware are not confirmed either. I would like to know where you get your information from for as yet we - and we believe Commodore UK - have no reliable specifications. And even when we have we won't necessarily believe them or expect them to be permanent! The CDTV is not supplied with a keyboard or secondary disk drive, and many Amiga disk applications will probably not work on the CDTV - many games almost certainly won't and neither possibly will many applications. That would indicate that many CDTV applications may not work properly on an Amiga's hard drive. None of the above was mentioned in your own somewhat biased remarks.

To be honest, I don't know all about the two options and would certainly not compare one against the other until we have tried both. You have made too many unproven assumptions for me to agree with your views.

Dear AUI,

In response to the reply that you gave Paul Morrey on the subject of the Amiga Helpline Service in Glasgow, I would like to state that I too have had swift and useful help from them.

I feel that your comments were quite unjustified, as you seemed to be suspicious of a free helpline. Not everybody is out for every penny they can get, and if there were more genuinely useful services, like the Amiga Helpline Service, that didn't try to rip you off, the world would be a happier place.

**Iain MacKenzie,
London.**

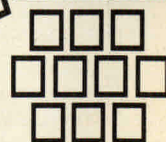
Dear Iain,

Your opinion is as valid as mine - at least to you.

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brickbats.*

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COMPUTER ETHICS

CAUTIONARY TALES AND ETHICAL DILEMMAS IN COMPUTING

Tom Forrester and Perry Morrison

BLACKWELL HB £35.00 PB £12.95

Every day there seems to be more computer crime. Or at least more computer crime reported. Nevertheless, major institutions, especially financial ones, are reluctant to publicise just how much skulduggery is actually committed. And when the public does hear about computer crime somehow it seems to take it less seriously than if the same amount of swag were smash and grabbed from the local bank. Other areas too, such as confidential information, where people would hesitate to pry if it were in a conventional form, seem almost amusingly fair game if it is a computer file that is being entered. Is there something about computers that negates our ordinary sense of ethics?

The intellectual challenge of fooling a system which requires no physical risk provokes the competitive and acquisitive instincts of the technically competent immoral; and always one step behind in a Tom and Jerry situation, are security experts discovering new crimes and trying to work out how to beat them.

Whilst large companies are starting to review their computer security, there is a growth in access-control software which permits users to perform authorised functions through the use of a password. Even this does not protect a company against fraud which is often committed by employees going about their legitimate tasks in an illegitimate way.

Obsession with Fred and God

However, there are security packages available nowadays which can bar "guessable" passwords. For example an English system might ban girls names and film stars and football teams (or derivatives such as GAZZAWOMBLE etc) or (SOX, TWINS etc), while in the U.S. passwords such as the names of baseball teams or the apparently most common words such as Love closely followed by Sex - indicative of an obsession which is absent in the British ratings - where top of the list is Fred, followed by God, Pass and Genius! are ruled out. That difference in wordchoice clearly

indicates differing obsessions. Fred or Sex? I know which I think is the most fun...

Further to this, 'special characters can be forced' - try guessing [G @ \ L C !! As another check, the cashcard technology of the mid-eighties is at last reaching computer systems of the 90s, so that a user can be barred after a number of wrong attempts.

However, none of this 'access security' helps in the disgruntled or crooked employee scenario, which is by far the largest part of computer crime. The best guard against this is auditing software that will keep track of every command given to the computer at any time of day or night. This is sometimes known as 'C2 Security' after the U.S. D.D 'Orange Book' on Security Standards.

The headline makers have mainly been whizz kids using personal computers from their bedrooms, breaking into some top security system, but by far the commonest crimes have been found to be committed by clerks and cashiers who have little in the way of technical skills.

Hacking - Harmless Fun?

The question of ethics and the need for a universal Code of Practice are discussed in 'Computer Ethics' which asks the difficult question, whether hacking is merely harmless fun, or is it a crime equivalent to burglary and theft?

Information stored on computers can invade individual's privacy, as we have witnessed, with public service industries selling information to commercial companies.

We must consider the rights and obligations of the individual versus the rights and obligations of the group. In particular, we should be concerned with those groups who hold enormous power and influence over the effective management of society - our government, judiciaries, police, security agencies and so on, say Forrester and Morrison.

The aim of the book is to describe some of the problems created for society by computers and to show how these problems present ethical dilemmas for computer professionals and computer users.

Martin Witton reviews a book that asks when is computer crime not a crime and should ethical dilemmas be a part of every programming language?

(Although as one access-control-software innovative company director says "What ethical dilemmas? There doesn't seem to be much of a dilemma to me!")

'Computer Ethics' has been designed as teaching material for colleges and university computer science courses, to alert the next generation of experts to the vulnerability of human misuse of computers. It would, of course, equally be useful as a learning tool for potential saboteurs!

As many home computer users have been affected by viruses, the chapter on 'hacking and viruses' is of particular interest. 'What is hacking?' and 'how do hackers hack?' provide insight into the "success" stories of famous 'great' hackers.

"One precursor to the virus included a computer game known as 'Core Wars'"

Core Wars

How does a virus get into a computer?

More common viruses tend to erase the entire contents of a user's disk or else corrupt programs so they are irretrievably damaged. The most common way to infect a system viral is to piggy-back a virus on to bonafide Aprograms so it can be transported on storage media such as hard disks. In addition, a virus can be transported via network links and electronic mail. One precursor to the virus included a computer game known as 'Core Wars', which operates by setting aside an area of machine memory as a battleground for programs to compete for territory and attempt to destroy each other.

The book concludes with the sentiment that computer professionals must upgrade their social awareness and ethical values. Reading this book, any computer user would go some way in achieving that.

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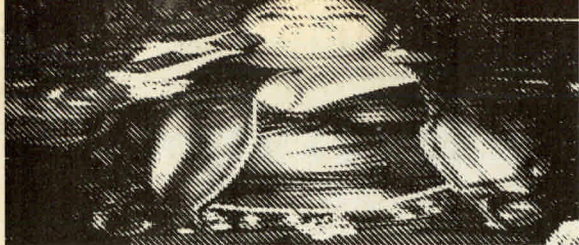
THE AUI ADVERTISERS INDEX

CompanyPage No.
 17 BIT SOFTWARE .82
 AJPD L.....113
 ALTERNATIVE IMAGE63
 AMIGA BANDITS66
 AMIGANUTS118
 ANCO79
 APPLEBY
 COMPUTERS65
 ARK131
 ASHCOM114
 BATTLEAXE PD131
 BLITSOFT138
 BYTES AND PIECES ..42, 43
 CARE ELECTRONICS130
 CLUB AMIGA138
 CRAZY JOES80
 DATELELECTRONICS6-8
 DELTA PI121

CompanyPage No.
 DEM X45
 DESERT SOFTWARE .133
 DOWLING
 COMPUTERS72, 73
 ED LIB135
 EVESHAM MICROS38, 39
 FIRST CHOICE ..58, 59
 FMG44
 GASTEINER.....18
 GOLDSTAR COMPUTERS76
 GPS123
 HARWOODS25, 26, 27, 28, 29, 30, 31, 102
 HB MARKETING60
 HOBBYTE98
 ICPUG.....135
 INTRASET.....68
 JAM121
 JCL BUSINESS

CompanyPage No.
 SYSTEMS57
 KOSMOS131
 KRT VIDEO106
 LADBROOK
 COMPUTING85
 MARCAM.....97
 MEDIA DIRECT 92, 93
 MICROMAIL41
 MIDITECH135
 MJC SUPPLIES52
 NEW AGE
 COMPUTERS145
 NEW HORIZONS36
 NEWTEKOBC
 NICK WILLIAMS ..131
 OMEGA PRODUCTS ...66
 ON LINE COMPUTERS63
 PBT138
 PLC106
 POSTHASTE106

CompanyPage No.
 POWER COMPUTING9, 35, 49, 13
 QAC135
 RICHARDS
 COMPUTERS123
 ROMBOIBC
 SILICA SHOP77, 103
 SOFTLOGIK14
 SOFTMACHINE ...107
 SOFTSTORE63
 SPD123
 STRICTLY PD107
 SURFACE UKIFC
 THE BLUE RIBBON CO3
 THIRD COAST
 TECHNOLOGY86, 108
 TRILOGIC104, 105
 VIRGO
 DEVELOPMENTS .113



THE FAT LADY SINGS

Volume 18 No. 69½

The **AUI** page that brings you the undiluted, undenied, totally unreliable truth! Direct from Amiga Devcon'trik – the Amiga Developers and Magicians Conference.

New Products

With Christmas coming ever closer (it must be – Easter Eggs have begun appearing in the shops), the **AUI** offices have been inundated with details of the latest and greatest Amiga peripherals which may reach you some time in the future.

As per usual, 90% of the new products have been "New" and "Exciting" 512K Ram expansions, but that still leaves an interesting 10% of products which you might not have seen before. Here's a list of the hottest new pieces of kit around, compiled from press releases (so they must be true) and secret sources (so they must be lies).

- ★ The New and Exciting Hard Disk emulator, from ProProTeckNeck. This beige box costs only £50 pounds, and sits beside your Amiga making whirring sounds. Occasionally a red LED flashes on and off. Convince your friends you have moved up to the big league. By placing a floppy drive inside it you can use it to store data. Neither the Power supply nor the LED are supplied.
- ★ The New and Exciting Nanoflash Flicker Fixer, from HeadAche Ltd. This exciting new solid state product is attached to the front of your monitor to provide a completely flicker free display, even when using interlace display. Ideal for DTP and Video. Just sellotape the black cardboard to the screen for instant relief from flicker.
- ★ The new and exciting 512K Ram expansion from DodgeyChip Unlimited. Connects to the outside of the trapdoor and doubles your memory. Available with or without clock. Fully chipmem compatible. Yours for a tenner mate.
- ★ The LightJoyMouseTablet. This new and exciting product replaces all your existing input devices in one small compact unit. Simply connect to your joystick port and throw your joystick, mouse, lightpen and graphics tablet away. The LightJoyMouseTablet



The Thin Lady
groans

connects via a simple strap mechanism to your elbow, knee and index finger, and provides you with 300 dots per inch resolution. Takes only three weeks intensive training to become proficient. Be the first kid on your block! (Be careful of tennis elbow).

- ★ Virtual Reality suit, from PainTeck. Just slip into this discrete suit and enter an entirely new virtual world. comes with goggles, stereo sound and three games: Sumo Wrestling, Sky Diving and Virtual Desktop Page Maker. Connects to the parallel port. Warning! The Sky Diving software is perfectly safe, although we recommend that users with nervous dispositions keep their eyes closed. All bruises vanish within days. Special Adult selection available! Write for details.
- ★ The Very New and Very Exciting unique 512K Expansion board from Advanced Research Systems Electronics. Yes, this new circuit board features just 2 chips and connects directly to the trapdoor. Available with or without unique clock. It is totally and uniquely chipmem compatible.
- ★ AMISS. A new and exciting programming language. Create your own games. This easy-to-use system can automatically generate commercial quality games from the pull down menus. Modes include "Film Tie-in", "Mindless Shoot-'em-up" and "Universal 3D Grand Prix Racer". Simply select your own graphics and sound effects to produce the next Top Ten smash hit. Available in Seedy Room.
- ★ The new video JamLock from JWSmallware. Stop others stealing your jam with this camera-based security system. Focus the camera on your jam, and the Amiga will start shouting if it's touched.
- ★ New and exciting Cordless memory expansion from Silvery Image. Just place this 1 chip circuit board on the same desk as your Amiga for an extra 512K of memory. Comes with clock, whether you want one or not. Totally and utterly chipmem compatible, whatever that means.
- ★ Handheld Plotter. Connects to the serial port and generates believable ex-

Competition Results

We are pleased to be able to announce the winners of our "Win A Pat Kelly" competition (see October **AUI**). Yes, a lucky reader will soon be hearing the sound of a Pat Kelly hitting their doormat. After so many entries, it's just too bad that we had only one Pat Kelly to give away, but that's the way it is I'm afraid.

For reference, the answers to the competition were:

1. C
2. B

And the winning slogan was "I don't know if you're the right people to write to, but my Gas Central Heating has been playing up again." Well done Mrs Dwynt, and commiserations to the many hundreds of unlucky readers who sent their friends' names in. Better luck next time!

cuses. Menu options include "Day off work" and "Copy late again". Comes compete with MODOM option, which provides posh female accent.

- ★ The Green Amiga. This is a refurbished A1000 that comes complete with its own rubber plant. The 1000's motherboard has been removed so that all you have to do is water the plant through a special plumbed in keyboard. Guaranteed never to crash or guru (or even work). For techies, Greensoft will supply a CDTV box instead and a resprayed (black) 1000 keyboard (Just like the real CDTV!) Price £599.00 + VAT.
- ★ Your own Fat Lady! **AUI** soft has just a few left. Plug then into your drives, insert a disk and see them guru! Only £24.99.
- ★ Next Month: win your own John Kennedy!



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The colour solution is fully compatible with all Amiga's from a standard A500 to the ultimate A3000. No additional RAM is required to get up and running.

You will see from independant review comments that we are undoubtedly their first choice and that was before the complete solution was launched. If you have just purchased your Amiga and are not sure what to buy next, then just read the comments or send for full review and demo disk.



Actual unretouched digitised screenshot

Features ...

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Amiga Computing: The best Amiga digitiser has had the technicolour treatment. Vidi must be one of the most exciting peripherals you can buy for your Amiga.

Micro Mart: When I first saw Vidi "in the flesh" as it were, at the CES show last September it looked to be the answer to a frustrated Digi View owner's dreams - in fact to see pictures appearing on screen without the customary two minutes wait seemed almost too good to be true. I have consistently produced more good quality pictures in the short time I have had Vidi than I ever did with Digiview.

Zero: Now under normal circumstances cheap usually means poor quality but this is not the case with Rombo. Why? cos Vidi-Amiga is the best digitiser for under £500 and I've tried them all.

Amiga Format: Where quality is concerned, Vidi produces some of the best results I've seen on any digitiser at any price.

Amiga User International: The latest addition to the Rombokit is called Vidi-RGB and brings this already impressive package to the realms of totally amazing. **CONCLUSION:** Who will find Vidi-Amiga useful? The answer to this is almost anyone with a video recorder or camera and a passing interest in graphics.



Visit us at Computer Market Show, Rex Centre, Birmingham. 11th - 13th October 1991. Stand no 144.

Full colour demonstration disk available for only £1.95 to cover P&P.**

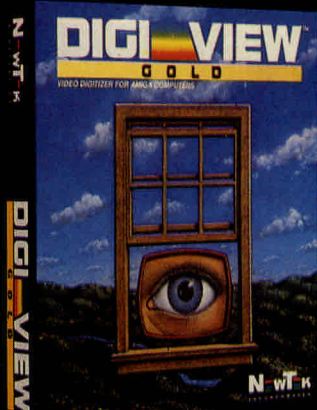
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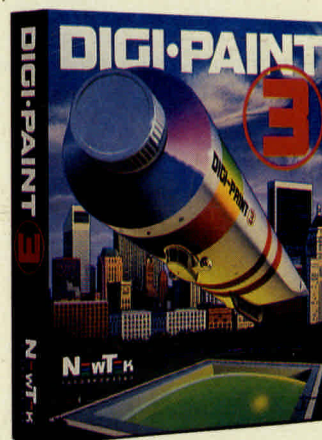
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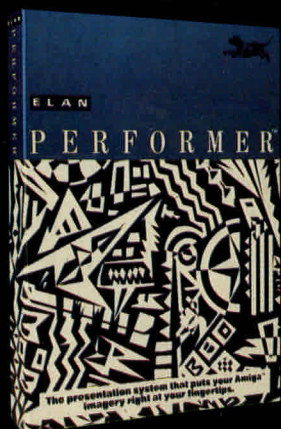
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